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Challenges and Enabling Practices in Management of External Consultants In ICT Projects: an Exploratory Study of Managers' Perspectives

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CHALLENGES AND ENABLING PRACTICES IN MANAGEMENT OF EXTERNAL CONSULTANTS IN ICT PROJECTS: AN EXPLORATORY STUDY OF MANAGERS' PERSPECTIVES

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Abstract

CHALLENGES AND ENABLING PRACTICES IN MANAGEMENT OF EXTERNAL CONSULTANTS IN ICT PROJECTS: AN EXPLORATORY STUDY OF MANAGERS' PERSPECTIVES

While there are many external consultants who greatly contribute to the success of Information and Communication Technology (ICT) projects not all consulting engagements are without challenges. In order to make the best use of consulting resources and increase return on investment (ROI), it is important to recognize what challenges may arise in management of consultants and what practices can help managers in dealing with these challenges. Therefore, the focus of this research is to gain additional insights into potential challenges and enabling practices in management of external consultants by examining experiences and perspectives of managers in ICT projects. Examination of consultants' perspectives is not in scope of this research.

For the purpose of this study, consultants are considered to be all external individuals who are hired as a body in a project team on a temporary basis to work on the execution of ICT projects. This is an exploratory qualitative research study that employs semi-structured interviews as a data collection method, and coding and thematic analysis as a data analysis method. The empirical data is examined through the lenses of agency theory and transaction cost economics, which provide a fertile ground for understanding and explaining the phenomena of interest. A number of constructs from these two theoretical frameworks are extended into new sub-constructs that are grounded in the empirical data.

The findings of this research study indicate that managers may anticipate the following challenges in management of external consultants in ICT projects: consultant short-term goals, principal financial motivators, status update problems, knowledge transfer problems, truthfulness problems, capabilities mismatch, up-selling, getting into comfort zone, expiring contract problems, power of knowledge, work estimate problems, consultant arbitrariness and challenges with new consultants. Furthermore, the findings of this research study indicate that the following practices can enable managers to deal effectively with challenges in management of external consultants in ICT projects: frequent follow-up, usage of multiple information sources, peer review, multiple progress verification, direct face to face management, expectations setting, deliverables management, proper procurement and selection process, creating proper atmosphere, payment control, limiting length of contract, and building relationships and trust.

This research makes a contribution to theory by providing a systematic presentation of all challenges and enabling practices in management of external consultants in ICT projects in an integrated model. Moreover, this research makes a practical contribution by providing recommendations on how to cope with the challenges in management of external consultants in ICT projects.

Keywords: consultant, challenges with consultants, management of consultants, ICT project, project management, agency theory, transaction cost economics.

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Za mamu, tatu, Srđu i Irenu …

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CHAPTER 1: INTRODUCTION

Employment of external consultants has become quite common practice (e.g. Liberatore & Luo, 2010; Nevo et al., 2007; Appelbaum and Steed, 2005; Lee et al., 2004; Yoon and Suh, 2004), but not necessarily a simple decision because there are many different reasons behind an organization's choice or need to hire consultants. Poulfelt and Payne (1994) summarize the main reasons why companies hire consultants as the following: to provide expertise, knowledge and new methodologies, to provide additional resources, to present new solutions to the organization's problems, to act as an external catalyst and moderator, to bring an independent and neutral perspective to the organization, to legitimize results and for political motives.

External consultants can provide various benefits to the organizations such as brining fresh ideas and best practices to the business issues (Hilditch-Roberts, 2012), and solving specific problems (Poulfelt and Payne, 1994). Furthermore, Kovar and Mauldin (2007) note that external consultants can provide training to internal staff, help with change management and provide more cost-effective alternatives for certain assignments. Hilditch-Roberts (2012) holds that a key benefit that consultants can bring is the speed of action because they usually can deliver faster than internal employees who are burdened with extra day-to-day operational tasks. Nevo et al. (2007) found that external consultants can provide a rich source of valuable, short-term capabilities, especially in organizations where internal IT capabilities are low.

While there are many external consultants whose knowledge, expertise and professionalism can bring significant benefits to organizations, not all consulting engagements are smooth and valuable (e.g. Wong et al., 2005; Kumar et al., 2003). Therefore, in order to make the best use of consulting resources and increase return on investment (ROI) it is important to know what possible difficulties may arise in management of consultants in information and communication technology (ICT) projects so that managers can anticipate potential issues and prepare adequate strategies ahead of time in order to be able to address these issues when they occur. The best source for discovering potential challenges and effective practices in management of

external consultants in ICT projects are individuals who supervise and administer the work of these resources on a daily basis. These individuals are practicing managers who can provide the real-life, everyday work experiences in management of external consultants. If managers are aware of the potential problems and know what practices may help them in addressing these issues, this may result in reduction of ICT project inefficiencies and associated costs, more accurate project schedules and improved client satisfaction. Moreover, these additional improvements of IT productivity can lead to an overall improvement of a company's performance (e.g. Barua et al., 2004).

For the above reasons, the focus of this research is to gain additional insights into potential challenges and enabling practices in management of external consultants through the examination of the ICT project managers' experiences and perspectives. Examination of consultants' experiences and perspectives is out of scope of this research because this research is bound by the pragmatic considerations of restricted funding that was available to complete this study. However, future research studies can extend this study and examine consultants' experiences to provide another view of the phenomena of interest. It is also important to note that this research is examining perceptions of the challenges and enabling practice from the individual point of view of ICT project managers and not from the project or an organizational point of view.

In summary, the focus of this exploratory qualitative study is on the investigation of the issues related to external consultants from a management perspective rather than from an organizational behavior perspective. While many other studies describe the benefits that consultants can bring to organizations (e.g. Kovar and Mauldin, 2007; Dawes et al., 2007) the aim of this research is to identify specific challenges and practices in management of consultants in the context of ICT projects through the exploration of the day-to-day experiences and perspectives of practicing managers.

1.1 Consultant Roles

Kitay and Wright (2003) pointed out that academics usually do not distinguish between different consulting roles and often consider various types of consultants and

their activities to represent the same entity. Schein (1988) recognized three widely accepted models of consultation:

- The purchase of expertise model: purchase of expert information or expert service when an organization has neither resources nor time to carry out certain assignments. An assumption is that the client knows what kind of expert information or services are needed.
- The doctor-patient model: a consultant is hired to make a diagnosis of the company's problems and then, like a doctor, prescribe a therapy. An assumption is that the consultant can gather accurate diagnostic information by himself or herself. Therefore, building of strong relationship and trust between the client and consultant is needed to make sure that the client provides all the necessary information for the correct diagnosis.
- The process consultation model: both consultant and the client make a joint diagnosis. An assumption is that the client can provide more insights about the organization and with a help of the consultant can learn how to detect the problems on his own. The consultant acts as a facilitator who provides methodology and alternatives and works collaboratively with the client on the diagnostic process and prescribing a remedy, but it leaves it to the client to decide on what is the best way to solve the problem.

While Schein's characterization of the consultation models is more theoretical, Block (2000) provides a more practical description of the consultant's roles by adapting Schein's work and defining the consultant's roles as the following:

- Expert role: consultant is hired as an expert or a specialist to carry out particular tasks by serving as a member of a manager's team. The consultant is given permission to plan and implement a solution for the assigned problem and is held responsible for results.
- Pair-of-hands role: consultant is hired as an additional "pair-of-hands" on the manager's team. The manager has examined the problem and created an action plan. He or she informs the consultant what needs to be done and

retains the control over the methods of work and decisions on how to proceed. The consultant is expected to utilize specialized knowledge and make suggestions, but he or she does not question manager's action plan.

- Collaborative role: consultant is hired to work collaboratively with the manager and combine his or her specialized expertise with the manager's knowledge of an organization in order to help the manager in creating solutions. Data is collected and analyzed through the joint efforts. Creation of action plan, decision making and sharing responsibility for success or failure is bilateral.

It is important to note that consultants can change their roles during their employment in an organization.

Another important clarification that has to be made is the one on the differences and similarities between a consultant and a contractor. These two terms are often used interchangeably in practice and a clear distinction is usually not made between the two. While the role of a consultant typically implies evaluating clients' needs and providing expert advice and opinion on what needs to be done, the role of a contractor or a freelancer normally means carrying out the required services and work, but it may also involve evaluating clients' needs and providing expert advice. Furthermore, after a consultant gives a professional opinion or advice, he or she may enter into an agreement (contract) to provide the required services, at which point he or she becomes a contractor. Although differences between consultants and contractors exist, even contractors often refer to themselves as consultants, and the references that many researchers and practitioners make about consultants, including the above definitions of the consultants' roles by Schein (1988) and Block (2000), may also be technically applicable to contractors as they do not clearly distinguish between consultants and contractors. Block (2000) also highlights that there exist differences between internal consultants, who are recruited within an organization, and external consultants, who are recruited from outside the organization.

For the purpose of this study, consultants are considered to be all external individuals who are hired as a body in a project team on a temporary basis to work on the execution of ICT projects as either an expert or an extra pair-of-hands. They may be

recruited through the consulting companies or as independent expert advice and service providers, but they are all reporting internally. Hereinafter, these external consultants may be referred to as just consultants. Furthermore, an ICT project is defined as the one that involves development, implementation or usage of the information and communication technologies to support and enhance business operations of a firm.

Once external consultants are hired to work on the companies' projects they can be used many different ways to contribute to the success of these projects. Kubr (1993) lists the various ways how companies can make use of their consultants:

- Extending internal staff
- Acquiring information on environment, competition, business and technology
- Establishing new business contact
- Obtaining an impartial expert opinion
- Identifying, diagnosing and solving problems
- Developing and implementing new methods and systems
- Planning and implementing organizational change
- Training and developing management and internal staff
- Any combination of the above

An assumption made in this research is that the participating managers use their external consultants in any combination of the above capacities to help them with the execution of their ICT projects.

1.2 Problem Statement

Spending in ICT projects is huge. Gartner information technology (IT) research group forecasts that IT worldwide spending in 2013 will accumulate to $3.7 trillion and will reach $4 trillion dollars in 2015 (Gartner, 2013). Prior research indicates that the failure rate of ICT projects is quite high (e.g. Chen et al., 2009; Mahaney and Lederer, 2003), resulting in millions of dollars wasted (Nelson 2007; Goldfinch, 2007). Thus, the latest industry research shows that the failure rate of ICT projects ranges between 20

and 28%, depending on the size of the project with larger projects having a greater failure rate (Mieritz, 2012). Information and communication technology projects are generally complex undertakings (e.g. Patanakul, 2010; Goldfinch, 2007), which necessitate a range of technical and business skills for effective and efficient execution. Most companies typically do not possess all necessary technical and business expertise internally to successfully carry out implementation of their ICT projects. For that reason, organizations usually start hiring external consultants to supplement and provide additional expertise for their ICT projects. External consultants are outside resources that are employed by organizations on a temporary basis to provide specialized knowledge and services.

Companies' reliance on external consultants in ICT projects seems to be rather high (e.g. Liberatore & Luo, 2010; Nevo et al., 2007; Appelbaum and Steed, 2005; Lee et al., 2004; Yoon and Suh, 2004). For instance, a research of enterprise resource planning (ERP) system implementation projects found that external consultants are involved in 83% of the ERP implementation projects (Kumar et al., 2003). Furthermore, consulting services can represent a major cost for organizations (Jackson, 2010; Ehie and Madsen, 2005; Vogl, 1999; Mitchell, 1994; Baker and Faulkner, 1991). For example, Kumar et al. (2003) point out that the consulting expenses may account for as much as 70% of the entire ERP implementation project costs.

While many of the external consultants significantly contribute to the success of ICT projects (e.g. Kovar and Mauldin, 2007; Dawes et al., 2007), performance of some consultants may not always be up to the adequate standards (e.g. Violino, 2005; Kumar et al., 2003). Through their nature of playing a role of agents in an agent-principal relationship, consultants are typically concerned with their own personal self-interest (Eisenhardt, 1989a) and short-term goals, and they may neglect the long-term goals of a project or the organization that has hired them. Previous research reveals different issues with external consultants such as communication problems (Lev, 2005; Wong et al., 2005), poor quality of work (Wong et al., 2005; Kumar et al., 2003; Mingay and Peattie, 1992), shirking (Chen et al., 2009), opportunism (Dawson et al., 2010), work estimate problems (James, 1998), unfamiliarity with company's business processes and internal environment (Appelbaum and Steed, 2005; Wong et al., 2005; Vogl, 1999;

Mingay and Peattie, 1992; Kelly, 1979) and conflicts with the clients (Nevo et al., 2007; Themistocleous et al., 2001), which can create roadblocks in ICT projects. Goldfinch (2007) as cited by Brown and Brudney (1998) points out that governments that contract out ICT projects more frequently can actually expect having more late projects and smaller realization of the expected benefits.

Clearly, external consultants play a very important role in ICT projects and their performance is critical for the success of these projects. High representation (e.g. Kumar et al., 2003) and cost (e.g. Ehie and Madsen, 2005) of external consultants makes them critical factors that directly impact the project outcomes. Researchers note that consultants act as professional agents who possess highly specialized expertise and managers may have difficulties supervising them (Dawson et al., 2010). Even though external consultants are brought onto ICT projects to provide necessary expertise, in reality they may not always prove to be valuable investments. Inadequate quality of external consultants' work has a direct impact on the high failure rate of ICT projects. Therefore, in order to decrease the likelihood of ICT project failures, it is crucial to instigate effective management of external consultants and align their interests with the organizational interests through the usage of effective management practices. For the above reasons, the aim of this research is to uncover potential challenges that may be encountered in the management of external consultants and enabling practices the can be used by managers to address the aforementioned potential issues with external consultants and ensure successful engagement of consultants.

1.3 Research Objective

By nature, firms are seeking for efficiency in their operations. Since external consultants can undoubtedly contribute to the efficiency of firms, it is an imperative to get the most value from their engagements and increase ROI. However, in order to be able to do that, it is essential to know what possible difficulties may arise in management of external consultants so that managers can anticipate potential issues and prepare appropriate strategies in advance in order to be able to address these issues when they happen.

Substandard consultants' performance and their undesirable behavior can create delays and additional costs in ICT projects even after their completion. Moreover, work of external consultants may even have long-term effects on the organizations' business strategies and vision, and their daily operations. Therefore, additional investigation of factors that influence external consultants' performance in ICT projects is vital. Accordingly, the objectives of this research are to explore potential challenges that managers may encounter in management of consultants, and to discover what enabling practices can help them to deal with these challenges. The motivation for this objective comes from the practical problems that practitioners encounter in daily management of external consultants and a lack of a comprehensive theoretical model that deals with all challenges and enabling practices in management of external consultants in ICT projects. Although some scattered research in this area has been done, a number of researchers stressed that additional investigation of the issues related to IT outsourcing and productivity is needed (e.g. Watjatrakul, 2005; Lee et al., 2004; Yoon and Suh, 2004). Hence, a more detailed theoretical model that provides a more holistic view of all challenges and practices in management of consultants is necessary.

With an objective of gaining a better understanding of the challenges in management of external consultants such as self-interest, adverse selection, opportunism and shirking, this research builds upon two complimentary theoretical frameworks: agency theory and transaction cost economics. This research study extends a number of agency theory and transaction cost economics constructs into new sub-constructs. In order to gain first-hand insights into the phenomena of interest, the empirical evidence is collected from the practicing project managers by utilizing semi-structured interviews with managers in ICT projects. This is an exploratory research study that employs coding and thematic analysis qualitative research methods as described by Creswell (1998), Miles and Huberman (1994), Strauss and Corbin (1990), and Eisenhardt (1989b). Gathering of real everyday work experiences and perspectives of practicing managers facilitated development of an empirically supported and operationalizable theoretical model that describes challenges and enabling practices in management of external consultants.

1.3.1 Research Scope

For the purpose of this study, consultants are considered to be all external individuals who are hired as a body in a project team on a temporary basis to work on the execution of ICT projects as either an expert or an extra pair-of-hands. An ICT project is defined as the one that includes development, implementation or usage of the information and communication technologies to support and enhance business operations of an organization. Only consultants who report to internal management are considered and other consultants who do not report internally such as offshore consultants are out of scope of this study.

In order to make the best use of consulting resources and increase ROI, it is important to foresee what challenges may arise in management of consultants so that managers can be prepared and act proactively. Furthermore, it is important to identify prospective practices that can help managers in dealing with these challenges. In view of that, the scope of the research is limited to the exploration project managers' experiences with the aim of gaining additional insights into potential challenges and enabling practices in management of external consultants in ICT projects, and presenting those challenges and practices in an integrated theoretical model. Examination of consultants' experiences and perspectives is out of scope of this research because this research is bound by the pragmatic considerations of restricted funding that is available to complete this study. However, future studies can extend this research and examine consultants' experiences to provide another view of the phenomena of interest. It is also important to note that this research is examining perceptions of the challenges and enabling practice in management of external consultants from the individual point of view of ICT project managers and not from a project or an organizational point of view.

1.3.2 Research Questions

The aim of this research, identifying challenges and enabling practices in management of external consultants in ICT projects, is illustrated in the conceptual framework that is presented in the following Figure 1. This conceptual framework indicates that adequate management practices can enable managers to deal with the challenges in management of external consultants. Moreover, this conceptual framework helps to address the research questions, which are presented subsequently.

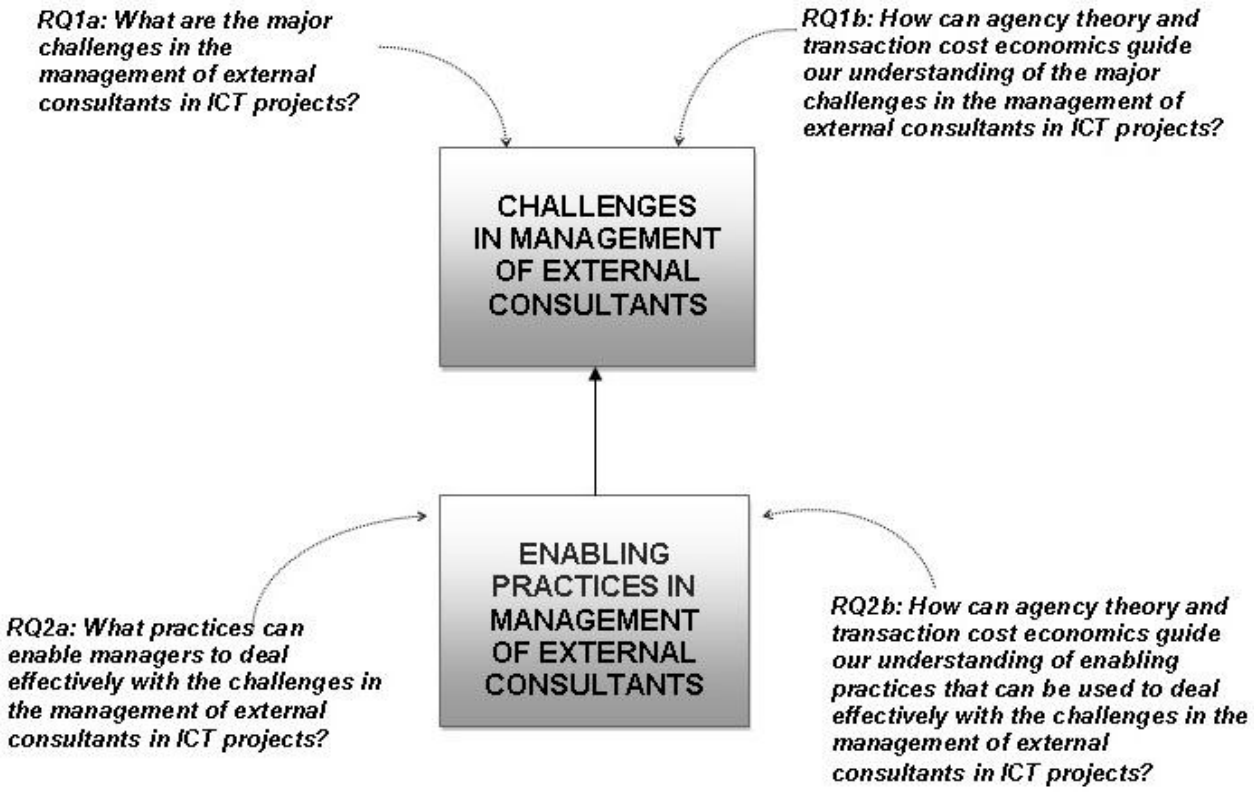

Figure 1: Research Questions Conceptual Framework

A review of existing literature indicates that previous research studies have exposed some scattered individual challenges that may be encountered in management of external consultants in ICT projects. However, very limited research has been done to identify and combine all challenges in a single research. Consequently, one of the main goals of this research study is to identify major challenges in the management of external consultants. Hence, the first research question is:

RQ1a: What are the major challenges in the management of external consultants in ICT projects?

Another goal of this research is to gain a better understanding of the challenges in the management of external consultants in ICT projects by examining them under the lenses of suitable theoretical frameworks. Accordingly, the next research question that is explored in this study is:

RQ1b: How can agency theory and transaction cost economics guide our understanding of the major challenges in the management of external consultants in ICT projects?

There also exists a need for a set of enabling practices that will equip project managers to effectively deal with challenges in management of external consultants. Hence, this research study also aims at identifying management practices that can be used by the practicing managers to enable them to deal effectively with the challenges in the management of external consultants in ICT projects. The following research question addresses this aim:

RQ2a: What practices can enable managers to deal effectively with the challenges in the management of external consultants in ICT projects?

Finally, in order to acquire a better understanding of enabling practices, which can be used to deal with the challenges in the management of external consultants, these practices are put under an umbrella of appropriate theoretical frameworks. Thus, the last research question that is explored in this study is:

RQ2b: How can agency theory and transaction cost economics guide our understanding of enabling practices that can be used to deal effectively with the challenges in the management of external consultants in ICT projects?

The usefulness and validity of the proposed conceptual framework for the investigation of challenges and enabling practices in the management of external consultants in ICT projects will be assessed during the examination of the findings that will be exposed through the qualitative exploratory analysis. Moreover, feedback will be gathered from the research participants to evaluate the validity and usefulness of the findings.

1.4 Knowledge Gap

Even though high proportion of external consultants and their importance for ICT projects makes them one of the critical factors that affect success of these projects, very little research has been done in exploring and understanding challenges that are associated with management of external consultants in ICT projects. Prior research studies point to inefficiency and competency problems with consultants (Wong et al., 2005; Kumar et al., 2003; Mingay and Peattie, 1992). In addition researchers also exposed conflicts (Nevo et al., 2007; Themistocleous et al., 2001), different work practices (Liberatore and Luo, 2010), communication (Lev, 2005; Wong et al., 2005) and knowledge transfer (Wong et al., 2005) problems. Along these lines, researchers also warned about shirking and opportunistic behavior that may be exhibited by consultants (Dawson et al., 2010; Chen et al., 2009), adverse selection (Bahli and Rivard, 2003) and work estimate problems (James, 1998).

Even less research has been done to offer some concrete practices that can help managers cope with the challenges in management of external consultants in ICT projects. For instance, Liberatore and Luo (2010), Chen et al. (2009), and Mohe (2005) emphasize the importance of establishing good working relationships and trust with external consultants in ICT projects in order to improve collaboration and performance. Mahaney and Ledeer (2010), Lambright (2009), and Ngwenyama and Bryson (1999) touched upon establishment of effective monitoring and controlling practices to reduce shirking problems, but no tangible operationalization of these strategies was offered.

In summary, although prior research studies have identified some scattered individual challenges and practices related to the issues in management of external consultants in ICT projects, these important topics have been underexplored. For example, Dawson et al. (2010) warn that serious gaps remain in understanding information asymmetry in the IS (information systems) consulting domain. Furthermore, Baker and Faulkner (1991) point out that there exists a lack of practical management frameworks that can be used by managers of service suppliers. There is a need for a more comprehensive research whose focus is to identify all interrelated challenges and enabling practices in management of external consultants in ICT projects. Furthermore, there exists a need to situate the above challenges and management practices in the context of suitable theoretical frameworks, which can help in explaining and understanding of the challenges with external consultants and formulation of adequate management practices that can help in addressing these challenges.

1.5 Research Contributions to Theory and Practice

The aims of this exploratory research include identifying challenges that can arise in management of external consultants in ICT projects and providing some concrete management practices that can enable managers to cope with these challenges. Considering the importance and magnitude of involvement of external consultants in ICT projects, the challenges that may arise in management of external consultants have been underexplored. This research makes several contributions to the current knowledge of undesirable consultants' behavior and associated challenges and enabling practices in management of external consultants. External consultants are employed to work on projects and management of consultants spreads across all ten project management domains, which is discussed in more detail in Section 2.7 of this thesis. Accordingly, the knowledge contribution of this research also adds to the body of knowledge in project management. The knowledge claims are of descriptive as well as prescriptive type.

The first contribution of this research is related to its empirical nature, as authors point out the lack of empirical research in the area of IT outsourcing (e.g. Watjatrakul,

2005). The second contribution is testing and evaluating previously exposed individual challenges in management of external consultants in ICT projects. The third contribution of this research is extending previous theories that can be used to address challenges with external consultants, and situating them in the context of ICT projects in order to provide enabling practices for management of external consultants. The fourth contribution of this research is synthesizing and grouping all identified challenges and practices to form a unified and integrated theoretical model of all challenges and enabling practices in management of external consultants in ICT projects.

In addition to the above contributions to the current knowledge of challenges and practices in management of consultants, this research also makes a contribution by extending the following agency theory and transaction cost economics constructs related to challenges in management of consultants: self-interest, information asymmetry, adverse selection, opportunism, asset specificity and uncertainty. Likewise, this research also extends the following agency theory and transaction cost economics concepts that are related to enabling practices in management of consultants: monitoring, controlling, governance, incentives and contract management, and building relationships and trust. At the same time, the contribution is made to the management literature by demonstrating that these two theories provide a fertile ground for the investigation and explanation of challenges and practices in management of external consultants in the context of ICT projects.

This research also makes a contribution to practice by providing project managers and other practitioners with new insights and systematic presentation of challenges in management of external consultants, which can enable them to acquire a better understanding of the factors that affect their consultants' performance. With a better understanding of these factors, managers can anticipate potential difficulties in management of consultants they may come across. By knowing this, they can build strategies ahead of time to be able to cope with these issues when they arise. This research also addresses some practical needs of managers by offering a number of recommendations and management practices that can be used to deal with challenges in management of consultants. These enabling practices may lead to improved project management routines and enhancement in alignment of interests between consultants

and their clients. The outcome of this could be reduction of project inefficiencies and associated costs, more accurate project schedules and improved client satisfaction. Improvements in productivity of consultants' engagements in ICT projects can ultimately result in an overall improvement of a company's performance (e.g. Barua et al., 2004).

1.6 Thesis Outline

This thesis consists of six chapters. Chapter 1 defines a problem statement and outlines research objective, scope and research questions. Chapter 1 also explains the knowledge gap and theoretical and practical contributions of this research study. Chapter 2 provides a review of the relevant literature and theoretical frameworks that are used in this research study. It starts off with a review of the literature that is concerned with challenges in management of external consultants in ICT projects. The next section provides a review of the literature that is dealing with practices in management of external consultants. This is followed by a literature review of the practices in procurement of external consultants. The next two sections of this chapter provide reviews of the two theoretical frameworks that are utilized in this study: agency theory and transaction cost economics. The last part of Chapter 2 offers an overview of the project management framework, which is very important for the effective management of external consultants in ICT projects.

Chapter 3 explains the research methodology. It starts with outlining the positivist research paradigm that this research was conducted under. The next section describes the research approach and rationale for using qualitative research methodology. This is followed by a detailed explanation of the design and development of the semi-structured interviews, which served as a research instrument in this investigation. The next section describes the purposeful sampling and participants characteristics, as well as how participants were selected for this research study. The following section is the data analysis methods section that describes the usage of the coding and thematic analysis techniques, which were used to perform exploratory qualitative analysis of the collected empirical data and facilitate generation of the proposed theoretical model. The last section of the Chapter 3 outlines how are ethical concerns addressed in this research.

The data analysis is divided into two chapters because of the two distinct knowledge areas and a large volume of data. Thus, Chapter 4 provides analysis of the empirical data related to challenges in management of external consultants and Chapter 5 provides analysis of the empirical data related to enabling practices in management of external consultants in ICT projects. Chapter 4 provides a systematic presentation of challenges in management of external consultants with the main concepts grouped under the constructs adopted from agency theory and transaction cost economics, which are further extended into new sub-constructs. Each of the defined sub-constructs on challenges in management of consultants has its own subsection, which provides definition, detailed explanation, supporting empirical evidence and linkage to previous theories.

Similarly, Chapter 5 provides a systematic presentation of enabling practices in management of external consultants with the main constructs grouped under the concepts from agency theory and transaction cost economics. These constructs are further extended into new sub-constructs. Each of the defined sub-constructs on the enabling practices in management of consultants has its own subsection, which provides definition, detailed explanation, supporting empirical evidence and linkage to previous theories. Finally, the last chapter of this thesis, Chapter 6 contains answers to the research questions that were outlined in Section 1.2.2. Additional discussion of the research findings and feedback provided by the study participants on the validity and usefulness of the research findings are also included. The subsequent section discusses the implications of this research study for both, theory and practice. The next two sections of Chapter 6 outline limitations of this research study, and offer some direction on future research related to challenges and practices in management of external consultants. Chapter 6 finishes with providing the concluding remarks.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The first part of this chapter provides a review of the relevant literature related to the challenges with external consultants and practices in management of external consultants in ICT projects. For instance, previous research has indicated that external consultants are considered to be one of the most critical factors that affect the success rate of ICT projects (e.g. Ehie and Madsen, 2005).

The second part of this chapter provides a definition and review of agency theory (Jensen and Meckling, 1976; Eisenhardt, 1989a) and transaction cost economics (Coase, 1937; Williamson, 1975, 1985, 1991) and situates them in the contexts of this research. Although the two theories are similar, they complement each other and provide a more comprehensive view of the phenomena of interest that involve human relationships in the organizational settings. Therefore, agency theory and transactions cost economics are appropriate for this research that is examining factors that affect external consultants' behavior in the context of ICT projects.

The last section of this chapter provides an overview of the project management framework and methodology, proper application of which is really important in management of external consultants in ICT projects. Previous research suggests that the lack of effective project management practices is one of the main reasons for ICT project failures (e.g. Chen et al., 2009; Mohe, 2005; Wong et al., 2005).

2.2 Challenges in Management of External Consultants

Mohe (2005) outlines that some of the issues with external consultants include problems in procurement of consultants and inexperienced consultants, while Ehie and Madsen (2005) identify consulting services as one of the most critical factors for the success of the ERP implementation projects. As do the above mentioned authors, a

number of others have through their research also discovered and pointed out some of the challenges and issues that may arise when external consultants are hired to work on projects within an organization, and what an impact this can have on the success of these projects. For instance, Goldfinch (2007), as cited by Brown and Brudney (1998), suggests that governments that contract out IT projects can actually expect to have more late projects and smaller realization of expected benefits.

Challenges with consultants may include limited practical experience (Appelbaum and Steed, 2005; Mohe, 2005; Wong et al., 2005). Although consulting companies will almost always use their senior consultants during the initial negotiation process, their implementation teams may be made up of novice consultants, who may be new hires, fresh from school (e.g. Applebaum and Steed, 2005), or may lack a solid understanding and consideration for the company's business processes and internal environment (Wong et al., 2005; Vogl, 1999; Mingay and Peattie, 1992; Kelly, 1979). Not knowing the key company processes results in a need for workarounds, which can create additional complications and inefficiencies. For instance, Ehie and Madsen (2005) point out that integration of company's business processes with the ERP software is more costly, almost by a ratio of three to ten, than the ERP software itself, and one of the contributing causes are high consulting fees. High consulting fees on ERP projects (Ehie and Madsen, 2005; Kumar et al., 2003) and the potential lack of good understanding of company's business processes (e.g. Wong et al., 2005) make consultants one of the main factors in the creation of the above issues. External consultants' lack of knowledge of the internal workings of the organizations may induce them into providing blanket solutions without much customization (Mitchell, 1994), or simply they may opt to use the pre-packaged solutions that they are familiar with and that they have used in the previous assignments (Pozzebon & Pinsonneault, 2012; Mingay and Peattie, 1992). The following Table 1 provides a summary of the main reasons why external consultants may be considered roadblocks in ICT projects.

Table 1: Challenges in Management of External Consultants

CHALLENGES IN MANAGEMENT OF CONSULTANTS	Wong et al. (2005)	Dawson et al. (2010)	Mingay & Peattie (1992)	Liberatore & Luo (2010)	Other Authors
INCOMPETENCY: Poor quality of work, low performance and efficiency.	Strong		Moderate		(Kumar et al., 2003; Violino, 2005)
LIMITED EXPERIENCE: Lack of practical experience or fresh from school.	Strong				(Appelbaum & Steed, 2005; Mohe, 2005)
UNFAMILIARITY WITH BUSINESS AND INTERNAL WORKINGS: Lack knowledge of companies' business processes and internal environment.	Strong		Moderate		(Appelbaum & Steed, 2005; Vogl, 1999; Kelly, 1979)
OPPORTUNISM (SHIRKING): Opportunistic behavior and lack of effort.		Strong			(Chen et al., 2009; Ngwenyama & Bryson, 1999)
INFORMATION ASYMMETRY: Not providing all information to clients.		Strong			(Goldfinch, 2007; Keil et al., 2004)
PREPACKAGED SOLUTIONS: providing familiar solutions without much customization.			Strong		(Pozzebon & Pinsonneault , 2012; Mitchell, 1994)
CONFLICTS: Differing objectives and interest from clients or conflicts with internal members.	Moderate			Strong	(Nevo et al., 2007; James, 1998; Themistocleous et al., 2001)
COMMUNICATION PROBLEMS: Ineffective and inaccurate communication.	Moderate	Strong			(Goldfinch, 2007; Lev, 2005)
INCOMPATIBLE WORK PRACTICES: Work practices mismatching those of clients.				Strong	
KNOWLEDGE TRANSFER: Poor quality of training and knowledge transfer.	Strong				

Even though it is because of the specific expertise that consultants are engaged to work on ICT projects in the first place, they may not always be experienced or competent to execute the given assignments to the satisfaction of their clients (Wong et al., 2005; Violino, 2005; Kumar et al., 2003; Mingay and Peattie, 1992). External consultants may not always demonstrate the required technical or business skills. In fact, in some cases as the project moves forward it becomes clear that a consultant is not more skilled than internal employees of an organization. Moreover, instead of already coming in with the required expertise some consultants use the projects to practice working with new technologies (Wong et al., 2005). Even though consultants' contracts may be terminated because of poor performance, it is not rare that their replacements create even more costs, because they start reworking and modifying things that were already done.

Another challenge with external consultants may include opportunistic behaviour and shirking. For instance, Chen et al. (2009) point out that poor consultant participation and involvement (shirking) can represent a problem in the ERP implementation projects. This may happen because monitoring and controlling practices are not well established and there exist gaps in understanding of what is required and expected of the consultants. Dawson et al. (2010) explain that both clients and consultants can behave opportunistically and that opportunism exhibited by external consultants is a real problem in ICT projects. They also add that opportunism results from information asymmetry, which creates a fertile environment for opportunistic behavior.

Nevo et al. (2007) underlines that conflict between internal employees and external consultants, which may result in lower performance in ICT projects, is especially likely to happen in the organizations with strong internal IT capabilities. The conflicts between consultants and clients may be caused by different issues, some of which could be disagreements on the implementation approach as well as issues of cost and schedule overruns. For example, one empirical survey found that throughout the implementation period of the ERP systems, conflicts with consultants are one of the most common managerial problems, which is exhibited in 38% of ERP system implementation projects (Themistocleous et al., 2001). Another research study by Kumar et al. (2003) also suggests that at the time of ERP systems implementations,

organizations face more behavioral and management related challenges than any other type of challenges. In fact, when external consultants are engaged, they add another layer to the already complex set of issues related to interpersonal human relations and technological complexity itself, and at that point management complications only start to mushroom.

Conflicting interests between external consultants and their clients may affect the success of ICT projects. Consultants' interests and objectives may be different from those of their clients and effective project management needs to be exercised to ensure that the consultants' interests are aligned with those of their clients. Thus, Liberatore and Luo (2010) suggest that possible project failures can be attributed to conflicting goals between consultants and their clients. For example, consultants may persuade clients to keep adding expensive system features and functions (James, 1998), which may not be entirely useful or necessary for the project itself. Accordingly, anecdotal evidence suggests that consultants will typically agree to any new requirements that can be requested in the middle of the so that they can charge extra fees for completing this additional work. Similarly, consultants may propose a low performance IT infrastructure or hardware components to seemingly lower the project costs (Wong et al., 2005). However, such inadequate quality of the IT infrastructure will create additional problems at a later time, when it is more costly to fix them. In all of these cases, aligning the interests of consultants and their clients would greatly benefit the project and prevent many such problems.

At times, consultants may provide inaccurate estimates to secure contracts and then later call for expensive modifications to the projects (James, 1998). If these types of issues are not dealt with on time, in some extreme cases this may result in a situation beyond control and consequently generate significant additional project costs. The problem of consultants' engagement with the tasks that they were not contracted to perform is another example of the consultants acting out of self-interest. For instance, the Auditor General of Ontario in his 2009 report on Ontario's electronic health record project explains that: "consultants have been paid, at high per diem rates, to prepare, review, and/or edit voice-mail greetings, thank-you letters, internal memos, Intranet pages, seasonal party communications, and documents prepared by other consultants"

(McCarter, 2009, p. 36). This is a clear example of a situation where external consultants may not be necessarily working on the tasks that they were contracted to do. Despite the consequences this may bring to the consultants' contracts, these situations can incur significant additional costs and set the whole project back.

Previous research also indicates that communication problems and misunderstandings between organizations and consultants can often arise (e.g. Dawson et al., 2010; Lev, 2005; Wong et al., 2005). Hence, Lev (2005) explains that some of these problems can be attributed to poor requirements, incorrect terminology, and poor documentation in general. He also adds that often there is not enough time allocated for the contractor to fully examine and understand the client's requirements and this in turn leads to bad implementation decisions, inadequate risks assessment, production of an invalid technological design and unrealistic schedules and budget. Communication failure between consultants and organizations at any point during the consultants' contract period is one of the major contributing factors that can lead to many other project challenges and undesirable results.

Another obstacle that may arise with external consultants in ICT projects are incompatible work practices between consultants and their clients (Liberatore and Luo, 2010). External consultants may become accustomed to certain work practices, which may not necessarily be compatible with the way their clients work. This can create additional complications and substantial time and resources may be needed to align their work practices with those of the rest of the team and the organization. Professional service suppliers, including external consultants, may not be honest or may exaggerate about their skills or experience in a particular area, and may take advantage of their clients who have little experience or knowledge about their needs or market prices of particular services (Bahli and Rivard, 2003). This type of behavior may result in adverse selection or undesired hiring outcomes that occur because of misinformation presented by external consultants.

Finally, project assignments commonly require external consultants to train the permanent staff members and perform knowledge transfer to the full-time employees who will support their solutions later on. Poor quality of training and insufficient knowledge transfer provided by consultants is another major problem that affects the

success of ICT projects (Wong et al., 2005). The reason for this may be that low priority and not enough time is allocated for the training and knowledge transfer sessions. These sessions are typically brief and may not include enough training material and documentation. Sometimes, consultants choose not to transfer the entire technical and business knowledge that is required to run and support their solutions, so that their services will continue to be sought after.

2.3 Practices in Management of External Consultants

According to the study of 99 IT projects by Nelson (2007), contactor failure problems were found in 24 % of the projects. This means that managers must focus on minimizing the impact of these problems and getting the most out of external resources by utilizing effective management practices in order to ensure success of projects. As outlined in the above Section 2.2, a number of challenges in management of external consultants may arise and project managers need to use proper strategies and techniques to cope with these issues. Previous research has warned that organizations are actually not very efficient in making the best use of their consulting resources and they generally do not possess the required skills in house to properly manage consultants (e.g. Mohe, 2005). Other situations that can further complicate and jeopardize success of ICT projects is the problem of not detecting and dealing promptly and efficiently with the issues that may be posed by consultants. Often case, it may be too late when those problems float to the surface and project managers may try to cover them up to avoid being blamed or punished in some way.

Lambright (2009) researched the factors that influence contracted workers' willingness to conform to the monitoring mechanisms that track their performance. Through the use of agency theory constructs such as contract rewards and penalties, she explained the extrinsic tangible motives of the contractors to conform to the monitoring mechanisms. In addition, she used the stewardship theory concepts, such as building trust and relationships and desire to improve service, to explain intrinsic intangible motives to use monitoring and reporting tools. She found support for both theories, meaning that both extrinsic and intrinsic factors have an effect on contracted

workers' accountability. The practices for management of external consultants in ICT projects that are found in the relevant literature are summarized in the Table 2 below.

Table 2: Practices in Management of External Consultants

PRACTICES IN MANAGEMENT OF CONSULTANTS	**Liberatore & Luo (2010)**	**Mitchell (1994)**	**Baker & Faulkner (1991)**	**Mohe (2005)**	**Other Authors**
MONITORING: Monitoring reduces consultants' shirking and increases accountability and performance.	Moderate		Strong		(Mahaney & Lederer, 2010; Jackson, 2010; Lambright, 2009; Ngwenyama & Bryson, 1999)
COORDINATION: Coordination improves consultants' performance and goal congruence.	Strong				(Ngwenyama & Bryson, 1999)
TRUST: Building and promoting trust improves performance and success of projects.	Strong	Moderate			(Maister, 1998; Sturdy, 1997; Schein, 1988)
COLLABORATION AND RELATIONSHIPS BUILDING: Building good working relationships and collaborating with consultants improves project success.	Strong	Strong		Strong	(Patanakul, 2010; Chen et al., 2009; Lambright, 2009; Kadefors, 2004; Kubr, 1993)
MUTUAL GOALS: Setting joint expectations, obligations and effort improves project success.	Strong				(Dawson et al., 2010)
CLEAR GOAL DEFINITION: Clearly defining goals and what is expected of consultants.		Moderate		Strong	(Jackson, 2010; Kubr, 1993; Aje, 1988)
PAYMENT CONTROL: Payment should be linked to performance.			Moderate		(Gomez-Mejia & Balkin, 1992)

One of the challenges in management of external consultants is consultants' shirking (e.g. Chen et al., 2009). One of the most effective ways to address consultants'

shirking is investing in monitoring and coordinating mechanisms (Liberatore and Luo, 2010; Mahaney and Lederer, 2010; Ngwenyama and Bryson, 1999). However, this may be very costly or may take a significant effort and time to implement and may not always be possible. Mahaney and Ledeer (2010) explain that there can be two types of shirking: loafing and poor focus. Loafing refers to spending time on activities not directly related to the project such as browsing the internet, socializing and taking long lunch hours. Poor focus means working on tasks that were not specifically assigned, tasks that may be more enjoyable or simply wrong tasks. Mahaney and Ledeer (2010) surveyed more than four hundred IT project managers and the results suggest that the use of planning and meetings as monitoring techniques appear to reduce both types of shirking (loafing and poor focus). Responsibility and comparison monitoring techniques, on the other hand, do not seem to reduce any of the shirking dimensions. Another interesting finding from their study is that shirking via poor focus can lead to project failures, while shirking via loafing may not. For example, a consultant may be loafing during some of his paid hours but at other times actually working on the right task, while the consultant that is shirking because of poor focus and actually working on the wrong tasks may hinder the success of the project to a greater extent.

A number of authors stress that another important practice that should be fostered in management of external consultants is building of trust and good working relationships because research shows that this is one of the most important factors that contributes to the success of the projects (Liberatore and Luo, 2010; Patanakul, 2010; Chen et al., 2009; Lambright, 2009; Mohe, 2005; Kadefors, 2004; Maister, 1998; Sturdy, 1997; Mitchell, 1994; Schein, 1988). For example, prior research indicates that client-consultant coordination has a significant positive effect on the project performance through reduction of the requirements and technical uncertainty and promotion of trust and goal congruence (Liberatore and Luo, 2010). Maister (1998) writes that success of the working relationship depends on how much clients trust their consultants, and that the clients are normally distrustful and consultants need to build the trust with them. However, it is also important that clients trust their consultants, because as Maister (1998) notes lack of trust can create problems with retention, turnover and recruiting. He

also adds that low level of trust negatively affects motivation and commitment, and results in lower productivity, efficiency and quality of work.

Sturdy (1997) provides an interesting observation about the client-consultant relationship in that he believes that there exists a mutual need of both clients and consultants to achieve a feeling of identity and control over the environment. He suggests that this is an iterative process in which clients' expectations create pressures for consultants whose ways of handling problems reinforce clients' insecurities. At the moment when clients gain confidence and control of the situation, they feel more comfortable with challenging and second-guessing the consultants on their approaches who then come up with yet another way of doing things, which renews the clients' anxiety. In summary, clients and consultant constantly create and fuel insecurities for the other party, thus creating an uncertain relationship between the two (Sturdy, 1997). This implies that significant amount of effort and time has to be dedicated to building trust and good working relationships between consultants and their clients.

Chen et al. (2009) also emphasize the fact that success of the ICT projects largely depends on the consultant-client relationship. The degree of mutual understanding between these two entities and the similarity of their work values and norms can have a significant effect on the outcome of any project. Additional problems can be created when consulting companies swap consultants in the middle of the projects, because the time it took to build a good consultant-client relationship has now been wasted. Cooperation and team work, which is led by common interests and goals, is an absolute necessity if both clients and consultants want to be successful in ICT projects. Or as Mitchell (1994) puts it, a successful consultant-client relationship is largely influenced by their interdependency.

In order to get the most out of external consultants, not only do firms need to define the mutual goals and expectations between consultants and clients, but they also need to set the joint obligations and effort among them (Liberatore and Luo, 2010). This way, organizations can realign consultants and clients' interests and get them to work together toward a common goal. Dawson et al. (2010) posit that although both legal constraints (contracts) and social constraints (mutual goals and obligations) can be used to improve projects success, social constraints may be more effective in situations

where tacit knowledge is present, such as those of ICT consultancy. Nevertheless, before setting mutual goals between consultants and clients, organizations must first clearly define the project goals and objectives before engaging the consultants. The management literature indicates that a clear definition of the problem and goals of a project is vital for the successful engagement of consultants (Jackson, 2010; Mitchell, 1994; Kubr, 1993; Aje, 1988). When consultants have a clear understanding of what is being asked of them, they know what they need to focus on to produce expected outcomes. Furthermore, to increase consultants' productivity and efficiency, some researchers (e.g. Baker and Faulkner, 1991) suggest that their payments should be tied to their performance.

Finally, Mohe (2005) summarizes that companies have three generic strategies to address issues related to external consultants. These are strategies to obtain consulting expertise (via an efficient consultant procurement process), strategies to build up their own consulting expertise (internally within a company) and strategies to build up governance expertise to be able to effectively manage consultants.

2.4 Procurement of External Consultants

One of the most common reasons for companies' engagement of the outsourced skills from external consultants in ICT projects is the shortage of the in-house skills (e.g. Chen et al., 2009). Corcoran and McLean (1998) list some of the problems in making a decision to procure a consultant as the following:

- Difficulty in judging what is being offered
- Lack of experience with this kind of procurement
- Perceived quality of a service
- Multi-faced nature of provided services
- Potential impact of the service itself
- Purchaser-buyer style of interaction

Review of other supporting literature that deals with the procurement of external consultants for ICT projects is summarized in the following Table 3.

Table 3: Procurement of External Consultants

PROCUREMENT OF CONSULTANTS	Mohe (2005)	Heckman (1999)	Mitchell (1994)	Baker & Faulkner (1991)	Other Authors
LACK OF SYSTEMATIC SELECTION: Clients not using methodical and standard says to select consultants.	Strong				(Chen et al., 2009; Kumar et al., 2003)
PROCUREMENT NOT FORMALIZED: ICT procurement and supplier management functions are often not formalized.		Strong			
WORK WITH MULTIPLE SUPPLIERS: Avoid working with single supplier of consultants. Use multiple suppliers to increase competition and diversification.			Strong	Strong	(Kubr, 1993)
DEVELOP INTERNAL ALTERNATIVES: Developing and using internal resources.	Strong			Moderate	(Rottman & Lacity, 2008; Goldfinch, 2007; Nevo et al., 2007)
FORMAL & INFORMAL STRATEGIES: Firms can use both formal and informal strategies for supplier management.		Strong			
POST-PROCUREMENT EVALUATION: Post-procurement evaluation is important, but often neglected.			Strong		(Kubr, 1993)

One of the common problems is the unsystematic selection of external consultants for ICT projects (Chen et al., 2009; Mohe, 2005; Kumar et al., 2003). Along the same lines, Heckman (1999) also points out that IT procurement functions are not highly formalized and that IT supplier management processes are usually not established in the organizations. Bake and Faulkner (1991) pointed out the lack of practical frameworks for the management of professional service suppliers. Mitchell (1994) points out another very important issue. He warns against falling into the trap of

working with only a single supplier out of convenience. Although, it may seem simpler and more efficient to procure all required ICT products and services from the same supplier, in the long run this practice may incur much higher costs. Accordingly, Kubr (1993), and Baker and Faulkner (1991) hold that clients should use multiple consulting suppliers to induce them into more competitive behavior.

Interestingly, some researchers (e.g. Kumar et al., 2003) suggest that while high consulting costs may be one of the contributing factors that can lead to ICT project failures, few organizations actually consider the price tag as a consultant selection criterion. Companies should conduct a thorough evaluation of all available alternatives if they want to cut the costs and procure the best consultants. One of the alternatives that companies should consider instead of hiring external consultants is developing internal capabilities, and using internal resources, whenever possible (e.g. Nevo et al., 2007; Mohe, 2005; Baker and Faulkner, 1991). In fact, some researchers (e.g. Rottman and Lacity, 2008; Goldfinch, 2007) caution against overreliance on external consultants. However, in cases when external consultants need to be hired, more ICT specific procurement training should be provided to the involved internal members so that they can make the best possible procurement decisions. Heckman (1999) proposes that organizations may use both formal and informal strategies at the same time to manage relationships with their IT suppliers, by determining the most appropriate and fitting strategies based on the specific requirements of each case.

Another issue with the management of professional service suppliers is most apparent in the public sector. The research of Corcoran and McLean (1998) suggests that public sector organizations are usually engaged in the "arm's length" dealing with their suppliers, which is in contrary with the management theory that recommends formation of close supplier relationships in order to promote better understanding and trust development. Moreover, it appears that procurement in the government sector utilizes almost entirely fixed-price contracts (Bajari and Tadelis, 2001). An explanation for this is that competitive tenders increase transparency and decrease the likelihood of bribery and an improvised selection process. However, Bajari and Tadelis (2001) warn that for the complex systems, such as many ICT solutions, this kind of practice may actually incur higher costs, so perhaps cost-plus contracts might be more appropriate

when there is a greater chance of future project changes, such as in many complex ICT projects. As a final point, Mitchell (1994) and Kubr (1993) stress the importance of the post-procurement phase, which is often neglected or simply not enough time is dedicated to it. There never seems to be enough time to complete a careful evaluation of the end result of the consultants' work. Such assessment may not only be useful to determine if the same consultant would be re-hired in the future, but it could also be used for documenting other practical experiences and lessons learned, which can in turn be used for future external consultant procurement processes.

2.5 Agency Theory

The origins of agency theory are situated in the field of economics and its predecessors are rooted in the theories on risk sharing (e.g. Arrow, 1971) and goal divergence between different parties (Jensen and Meckling, 1976). Applications of agency theory are widespread, from economics (e.g. Dharwadkar et al., 2000; Logan, 2000), management (e.g. Gomez-Mejia and Balkin, 1992), information systems (e.g. El Arbi et al., 2011; Liberatore and Luo, 2010; Kohli and Kettinger, 2004), supply chain (e.g. Manatsa and McLaren, 2008) and finance (e.g. Jensen, M., 1998) to public administration (e.g. Goldfinch, 2007; Lambright, 2009). Such extensive usage of agency theory can be attributed to its main concepts such as contractual agreements, monitoring systems, information asymmetry, risk aversion, uncertainty and opportunism (shirking), which can be generalized in a vast variety of situations that involve human interaction, relationships and individual interests. These circumstances include both interpersonal and organizational settings.

The main problem that agency theory addresses is the principal–agent problem, in which a principal delegates some work to an agent who may be primarily concerned with his or her own self-interest. The problems occur when aspirations and objectives of the two parties diverge and when it is complicated for the principal to verify agent's behavior (Eisenhardt, 1989a). The Table 4 below describes the main tenets of agency theory as outlined by Eisenhardt (1989a).

Table 4: Agency Theory Tenets (source: Eisenhardt, 1989a)

Tenet	Description
Key Idea	Principal-agent relationship should reflect efficient organization of information and risk-bearing costs.
Unit of Analysis	Contract between principal and agent.
Human Assumptions	Self-interest, bounded rationality, risk aversion.
Information Assumption	Information as a purchasable commodity.
Contracting Problem	Agency (moral hazard and adverse selection), risk sharing.
Problem Domain	Relationships in which a principal and an agent have partly differing goals and risk preferences (e.g. compensation, regulation, leadership, whistle blowing, vertical integration, transfer pricing).
Principal	Principal hires an agent to perform some work.
Agent	Agent performs some work for a principal.
Contract	Contract defines an agreement and forms a relationship between an agent and a principal.
Self-interest	Principal and agent both have their own self-interest, which are usually not aligned.
Conflict	Conflict between principal and agent arises because of diverging goals, different risk preferences and, information asymmetry.
Moral hazard	Moral hazard refers to the lack of effort (or shirking) from an agent. The agent does not put in the agreed-upon effort because agent and principal's objectives are diverging and the principal cannot verify the level of effort that the agent applied.
Information Asymmetry	Principal and agent generally use different information to make an assessment of the uncertainties they face. They also usually have dissimilar information at their disposal.
Adverse Selection	Adverse selection refers to any misrepresentation of skills and capabilities by an agent. Principal may not be able to verify agent's claims before making a decision to hire the agent.
Trust	The level of trust between principal and agent influences their relationship. High levels of trust can be built based on reciprocity.
Monitoring	Principal can monitor actions of an agent to collect information about the agent's actual performance.
Controlling	Principal can try to control agent's actions, but this may not always be easy to do.
Incentives	Principal must provide the right monetary and non-monetary incentives for an agent to increase his or her motivation and effort.

Eisenhardt (1989a) highlights that the usage of agency theory is recommended for the investigation of the human problems that involve cooperative behavior. Since majority of human interactions in ICT projects require cooperation, it can be concluded that agency theory is suitable for the investigation of challenges and practices in management of external consultants. In the context of this research, external consultants represent agents and their clients represent principals. Agency theory points out that since "both parties to the relationship are utility maximizers there is a good reason to believe that the agent will not always act in the best interests of the principal" (Jensen and Meckling, 1976, p. 308). The following Figure 2 illustrates the main agency theory concepts and their relationships, with an emphasis on the self-interest of an agent and a principal. It can be observed that opposing goals, different risk preferences, asymmetric information, as well as agent's motivational levels and interpretation of the contract can lead to conflicts.

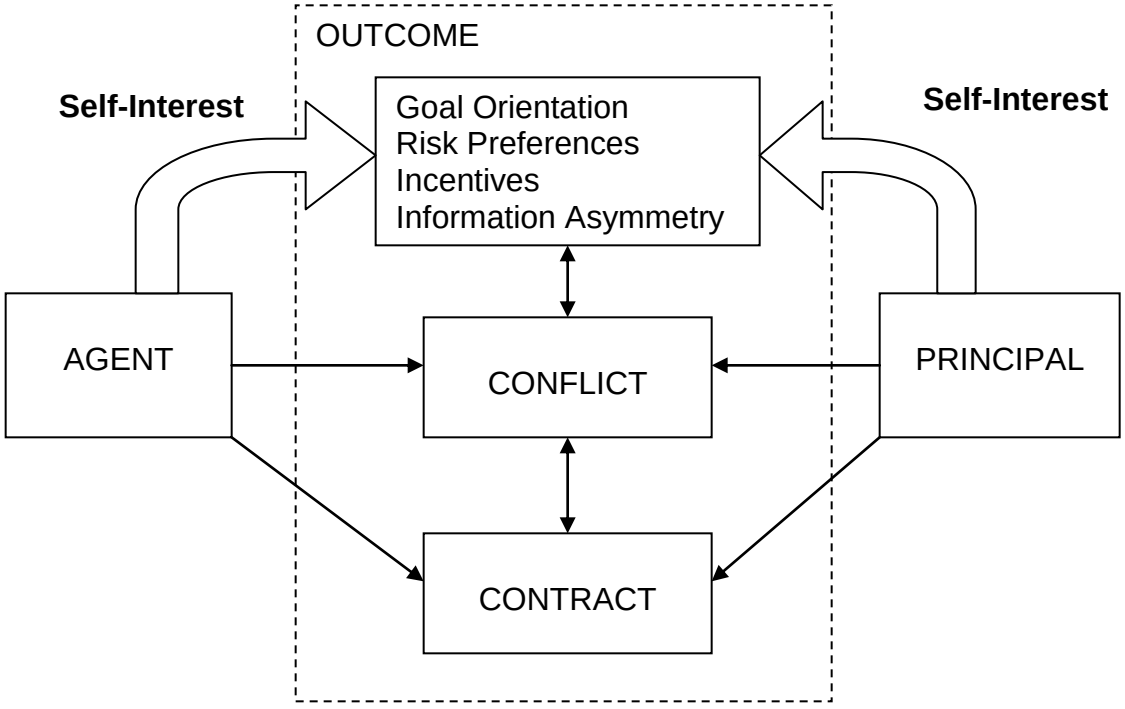

Figure 2: Agency Theory (adapted from Eisenhardt, 1989a)

Fundamental postulation of agency theory is that individuals and organizations behave rationally and act in their self-interest. Accordingly, the concepts from agency theory are utilized in this research to help explain challenges in management of external

consultants in ICT projects and formulate effective management practices that can help to eliminate or lessen the impact of the problems associated with these challenges.

2.6 Transaction Cost Economics

Besides economics and other disciplines, transaction cost economics, also known as transaction cost theory, is used quite extensively in IS (information systems) research as well (e.g. Nevo et al., 2007; Chen and Edgington, 2005; Watjatrakul, 2005; Lee, et al., 2004; Bahli and Rivard, 2003; Ngwenyama and Bryson, 1999; Kumar et al., 1998). Like agency theory, transaction cost economics has its roots in the field of economics (Coase, 1937). One of the main creators of transaction cost economics describes transaction cost as "the economic equivalent of friction in physical systems" (Williamson, 1985, p. 19). This implies that transaction cost is the friction that can be found inside the economic exchange mechanisms. Similar to the physical friction's absorption of energy and reduction of speed and efficiency, transaction costs result in the reduction of the economic efficiency (Williamson, 1991). Transaction cost economics addresses decisions to make or buy and provides a set of guidelines for analyzing buyer-supplier and outsourcer-vendor relationship (e.g. Lee et al., 2004; Bajari and Tadelis, 2001; Ngwenyama and Bryson, 1999). Therefore, this theoretical framework is quite appropriate for the investigation of management of external consultants in ICT projects. Moreover, this theory is mainly centered on the governance and determination of the most efficient model for managing transaction costs (Bahli and Rivard, 2003). According to Williamson (1985) human factors such as bounded rationality and opportunism as well as the environmental factors such as uncertainty, frequency and asset specificity are the main causes of the transaction costs. Williamson (1985) puts the most weight on the asset-specificity as the major cause of the transaction costs because the effects of this environmental factor are the most difficult to mitigate. For instance, the more a party invests in specific assets dedicated to a particular state of affairs such as specialized expertise or equipment and technology, the lower the chances that these resources can be transferred to another situation. The transaction cost economics tenants are presented in the following Table 5.

Table 5: Transaction Cost Economics Tenets (source: Williamson, 1975, 1985)

Tenet	Description
Key Idea	Buyer-supplier contractual relationship should reflect efficient governance of the transaction costs.
Unit of Analysis	Transaction cost.
Behavioral Assumptions	Bounded rationality, opportunism.
Environmental Factors	Uncertainty, frequency (complexity) and asset-specificity.
Contracting Problem	Asset specificity, moral hazard, relatedness, imperfect information.
Problem Domain	Various sources of transaction costs (cost to find the best supplier or buyer, cost to set up appropriate contract and cost to supervise and enforce correct execution of a contract).
Transaction Cost	Also known as the coordination cost, transaction cost includes all the costs of information gathering and processing activities, such as contract negotiation and price determination, coordination of human resources and machinery, governance of the agreed upon contract, and monitoring and enforcement of that contract.
Production Cost	Production cost includes all the costs that associated with the primary processes, which are involved in production and distribution of physical products and services.
Bounded Rationality	Refers to the cognitive limitations of the human mind. The notion that people are essentially rational, but only limitedly so, because they do not have the ability to process all the information required to act rationally in its entirety.
Opportunism	People act in self-interest. Opportunistic bargaining refers to one's party ability to set the details of a contract in situations such as when only a single provider exists or the costs of switching to a different provider are quite high.
Asset Specificity	The degree of relatedness of assets to a particular investment and obstacles in exchanging the assets for something else.
Uncertainty	Uncertainty about the future and the actions of other parties.
Frequency (Complexity)	Frequency or complexity of the dealings between the parties.
Relatedness	Relatedness of operational needs and the number of suppliers in the market.
Imperfect information	Also knows as information asymmetry refers to the situation where not all necessary information is available to the parties in a contract.
Shirking	Refers to the vendor's under-performance on the contracted activities.

The following Figure 3 illustrates how human factors of bounded rationality and opportunism, and environmental factors of asset specificity, uncertainty and complexity (frequency) affect the transaction cost that is incurred through coordination and information gathering activities such as contract negotiation and price determination, governance of the agreed upon contract, monitoring of contractors' activities and enforcing of the contract.

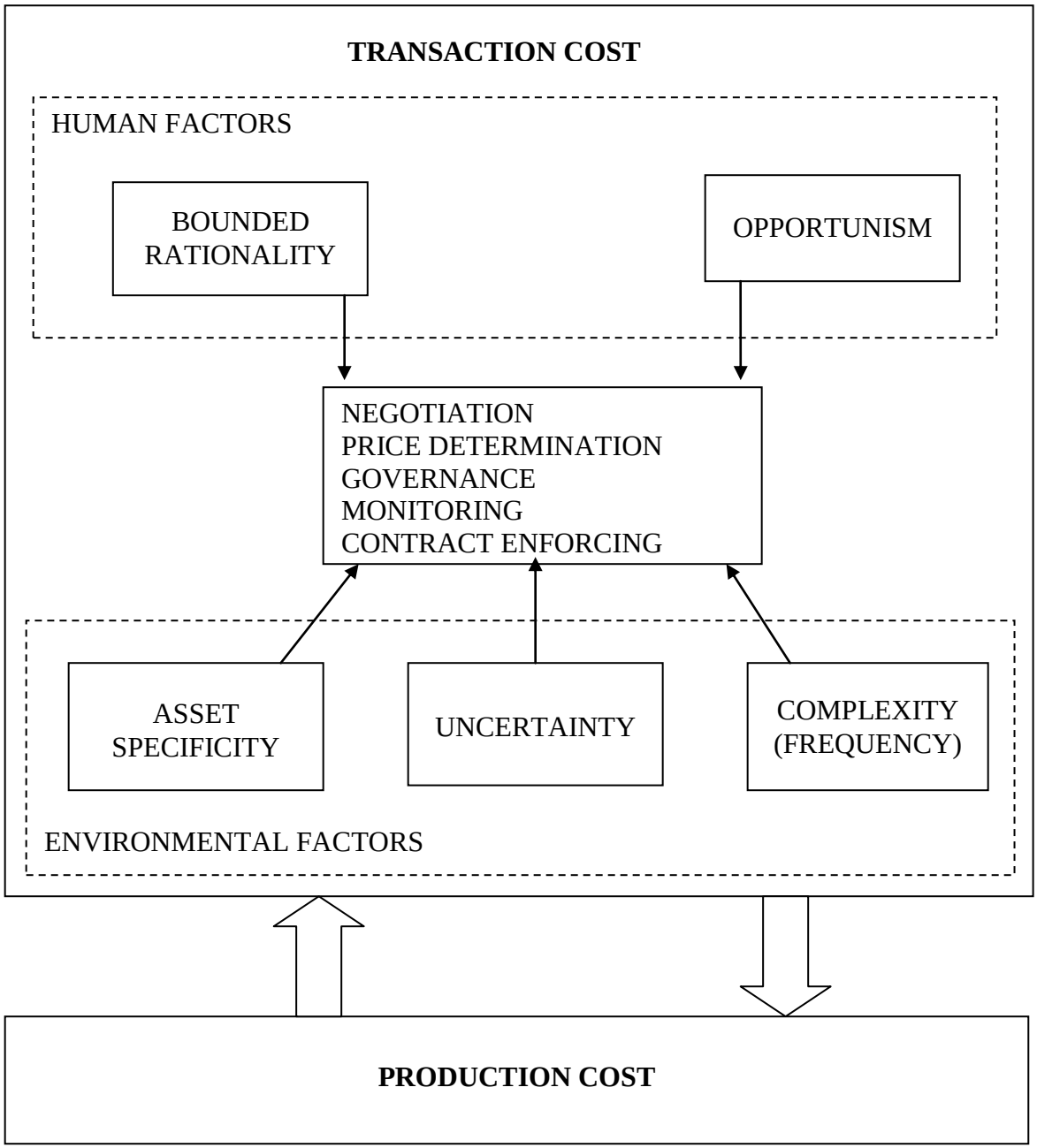

Figure 3: Transaction Cost Economics (source: Williamson, 1975, 1985)

Transaction cost can be summarized as all information gathering and processing costs that are needed to coordinate work of people and machines that are engaged into performing the primary production process. Production costs, on the other hand, are those that are incurred from the physical and other primary processes, which are required to produce and distribute the goods and services (Williamson, 1975, 1985, 1991).

Although agency theory and transaction cost economics are related and share many similar concepts, they still provide different, yet complimentary, perspectives for the investigation of the various issues related to contracting and human behavior. For example, the prior research (e.g. Lee et al., 2004; Aubert et al. 2003; Bahli and Rivard, 2003; Ngwenyama and Bryson, 1999; Ang and Straub, 1998) demonstrates that these two theories provide a solid theoretical foundation for the research of IT outsourcing problems. Since this research investigates issues related to management of external consultants, who act as IT outsources, employment of agency theory and transaction cost economics is relevant and appropriate. This research study is utilizing the following constructs form agency theory and transaction cost economics in identifying and explaining challenges in management of external consultants: self-interest, information asymmetry, adverse selection, opportunism, asset specificity and uncertainty. Furthermore, this study is using the following concepts from agency theory and transaction cost economics in formulation of the enabling practices in management of external consultants: monitoring, controlling, governance, incentives and contract management, and trust. Other theories such as organizational control and contingency theory were disregarded because they do not deal with the issues of self-interest, goal conflicts and opportunism, which are essential in trying to understand what factors contribute to the creation of challenges in management of external consultants.

2.7 Project Management

Management of external consultants in ICT projects is a part of the project management activities. Therefore, it is important to understand project management framework and its practices in order to realize their relatedness to the management challenges and practices that are associated with external consultants. Project management is a discipline that integrates and applies all available project management knowledge, skills, tools and techniques to all project activities in order to meet the project requirements (PMI, 2013). A project is a temporary undertaking whose objective is to create specific goods, services or outcome. Temporary nature of projects has an important implication for the management of human resources (HR) in a project. Huemann et al. (2007) point out that management of human resources, which includes external consultants, in the project-oriented companies is different from that of the traditionally managed companies. They also warn that project human resource management practices and knowledge base are mostly concerned with the traditional organizations. They do not consider the temporary nature of the projects.

Project management is broken into different life cycle phases which include: initiating, planning, executing, monitoring and controlling, and closing (PMI, 2013). Each of the project management life cycle phases represents a milestone and must be completed before the next phase begins. The project management framework contains forty seven key processes that span across ten project management domains or knowledge areas. The ten project management domains are: integration management, scope management, time management, cost management, quality management, human resource management, communications management, risk management and procurement management. These ten project management domains and their associated processes are depicted in Figure 4. Management of external consultants and their work on ICT projects spreads across all of the above ten project management domains. For example, monitoring and controlling consultants' work is part of the project integration management domain. Monitoring and controlling management practices are discussed in more details in Sections 5.2 and 5.3, respectively.

Creating work breakdown structures (WBS) and controlling scope is part of the project scope management domain. Creation of detailed work breakdown is discussed in Section 5.4.3, as a part of deliverables management practice. One of the challenges with external consultants in ICT projects refers to the problems where they may sometimes perform tasks that are outside of the scope of work (e.g. McCarter, 2009). These issues are discussed in Sections 4.2.1 and 4.2.2, which are concerned with consultants' short-term goals and principal financial motivators, respectively. Next, the following processes from the project time management domain are affected by the consultants' estimates provided for the required work activities: defining, sequencing, estimating duration and resources required for the completion of the work activities. The work estimates that are provided by consultants need to be verified for accuracy and completeness. However, this may not always be easy to do. There are situations where consultants may also be involved in estimating costs of the certain project components (e.g. Chen et al., 2009; Hossain et al., 2002). These issues fall under the project cost management domain. The cost related project issues that may be caused by consultants in ICT projects are discussed in more detail in Section, 4.5.1, which outlines challenges with consultants' up-selling. Quality of consultants' work is guided through the quality assurance and quality control mechanisms, which are part of the project quality management domain. Peer review and multiple progress verification management practices, which can be used as quality control mechanisms, are discussed in Sections 5.3.1 and 5.3.2, respectively.

Management of external consultants is also directly related to the project human resources management through the activities related to consultants' acquisition and supervision in the project teams. This is discussed in more details in Section 5.4.4 of the thesis. The next project management domain that covers external consultants' action is communications management and its information distribution and performance reporting processes. The communication problems with providers of the professional services can be expected (e.g. Goldfinch, 2007; Lev, 2005; Keil et al., 2004). They are discussed in Sections 4.3.1 and 4.3.2 of the thesis, which deal with the information asymmetry problems.

Figure 4: Project Management Framework (source: PMI, 2013)

Management practices that can improve communication problems are discussed in Sections 5.4.1, 5.4.2, 5.5.1 and 5.6, which are describing direct face to face management, expectation setting, creating proper atmosphere and building relationships and trust, respectively. Next, proactive risk management practices are very important for ensuring success of ICT projects (e.g. Masticola, 2007; Nelson, 2007; Wong et al. 2005). Thus, risk identification, qualitative and quantitative risk analysis, and risk monitoring and control processes that are part of the project risk management domain need to be exercised to manage the risks associated with external consultants. The risk management is discussed throughout the entire data analysis chapters. Next, creation, administration and closing of consultants' contracts as a part of the project procurement management domain are discussed in more detail in Section 5.5, incentives and contract management. And finally, project stakeholder management domain addresses consultant's role as a project stakeholder, which is discussed throughout the thesis.

As it was explained previously, management of external consultants spreads across all of the above ten project management domains. In view of that, this research study's goal of exploring challenges and enabling practices in management of external consultants in ICT projects will also make a contribution to the body of knowledge in project management.

Effective project management is one of the key conditions that must be met for any project to be successful. However, project management is not an easy endeavor. It takes a great deal of skills and experience to be able to effectively manage external consultants on top of technological and human relationships complexities. Since high quality project managers may not be easy to find, it is not surprising that project management is one of the most critical factors that affects success of ICT projects. In fact, lack of effective project management practices seems to be another one of the main reasons for ICT project failures (e.g. Chen et al., 2009; Wong et al., 2005; Mohe, 2005).

Another problem that was pointed out in the prior studies is that a limited amount of research has been done in regards to the HR practices in the context of temporary nature of projects. Thus, Huemann et al. (2007) point out that conceptualization of the

human resource management (HRM) in the project context is still rudimentary. Of course, the lack of the adequate literature and practical guidelines makes it a lot more challenging for the project managers to effectively supervise and administer external consultants in ICT projects.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This is a qualitative research that is conducted under a positivist approach with an aim of developing a theoretical model using the empirical evidence derived from the interviews with practicing managers. Eisenhardt (1989b) explains that the research process in the positivist view is directed toward the development of testable theories, which can be generalized across different settings. This research paradigm generally holds that knowledge can be created through an objective measurement of the reality of the phenomena of interest (Creswell, 2003; Lee, 1991). When positivism is applied in the social sciences, it is assumed that society functions consistent with the general laws like the physical world, and that knowledge can be derived from the logical sense making. The positivist view of this research and the researcher's experience and empirical knowledge are backed by the scientific verification.

3.2 Research Approach

This exploratory research is using qualitative research methodology that is deductive in nature and that builds on previous theories. Eisenhardt (1989b) explains that prior selection of significant existing theory constructs facilitates better empirical foundation for the developing theory. In general, qualitative research methodology is well-suited for discovering and studying issues behind context-specific, unique, complex, interrelated, idiosyncratic or multifaceted social processes or events, such as organizational or inter-office relationships, where quantitative evidence may be biased, inaccurate, or difficult to gather (Bhattacherjee, 2012).

Qualitative research methodology is good in helping researchers understand individuals and social and cultural contexts in which they operate (Myers, 1997). The aim of this research is to discover challenges and enabling practices in management of

external consultants in ICT projects and external consultants' factors that can negatively affect the outcome of these projects. Therefore, qualitative research is more appropriate than quantitative because understanding of participants' point of view and their associated social and institutional context are usually not preserved when textual data is quantified (Myers, 1997). Given the complexity of ICT projects, unique characteristics of external consultants and consultant-client relatedness, qualitative research is suitable for the exploratory investigation of the challenges and enabling practices in management of consultants. Appropriately, this qualitative research examines the actions of external consultants within the context of ICT projects through the exploration of the managers' experiences and points of view.

This research is following Eisenhardt's (1989b) recommendations and it cycles iteratively through literature review, data collection, analysis, and model development phases. Next, this research employs semi-structured interviews as a data collection method. Data analysis is performed by employing open coding and thematic analysis techniques. Blaikie (2008) note that not only does the coding help with describing the data, but it can be also used for data analysis and theory generation Thus, in order to gain new insights into unique challenges in management of external consultants in ICT projects, textual data is described into concepts or "codes", and grouped into categories and themes using the coding and thematic analysis approach. The detailed data analysis process is described in Section 3.5.

3.3 Interview Design

The research instrument used for the empirical data collection in this exploratory research is the semi-structured interview with open-ended questions. These qualitative interviews can reveal the meaning and interpretation of the behavior and perspectives of the social actors who are being investigated (Blaikie, 2008). Qualitative interviews can facilitate collection of rich data and enable researchers to explore individual's experiences, understand their points of view, and uncover their lived world before scientific rationalization (Kvale, 1996). Usage of semi-structured interviews instead of

other data collection methods such as questionnaires proved to be fruitful because the interviews allowed for the discovery of new insights and themes that may have not been thought about ahead of time and that arose as a result of the researcher's discussions with the study participants.

The initial interview protocol was reviewed by three experts (a university professor and two project managers) to verify the content validity and ensure that the interview questions are designed properly to capture desired empirical data. The interview protocol was revised based on the experts' feedback. Furthermore, the whole interview process, from start to finish, including audio recording was pilot tested with a project manager to verify usability and reliability of the research instrument. The aim was to test the comprehensibleness of the interview questions, and the overall flow and duration of the designed interview protocol. Based on the feedback from the pilot test, one additional question on knowledge transfer problems was included and some small modifications were made to the other interview questions. The interview protocol is attached in Appendix C. Each interview question was designed to investigate a major construct identified in the theoretical model. Probing questions were also prepared in the interview protocol and these questions were used to gather additional information and capture new insights depending on the initial response of the interviewees. By anticipating probe questions ahead of time, the interview questions were mostly consistent throughout all interviews.

This study collected data about the challenges and enabling practices in management of external consultants in ICT projects. Triangulation was employed during the interview phase by interrogating managers from various management levels in order to get a better picture of the phenomena of interest by looking at them from different angles. Accordingly, the targeted population included managers from a variety of management positions who have worked with external consultants on various ICT projects. In total, eight managers were interviewed. The interviews lasted from forty minutes to one hour and fifteen minutes. All interviews were audio recorded, with the prior consent of the research participants. During the interview process, the researcher also took field notes about the specific details, such as participants' body language and their reaction to certain questions. The interviews were later transcribed and the

interview transcripts were loaded into the QSR NVivo software to assist with qualitative data analysis.

3.4 Participant Selection

Although the aim of this exploratory qualitative research is not to confirm statistically significant relationships, this study followed Baroudi and Orlikowski's (1989) recommendations to increase statistical power by using purposeful sampling. Thus, the practicing managers who are directly involved in the daily management of external consultants in ICT projects and who have significant experience in management of these external resources were purposefully selected for this research. Even though the selection criterion for the participating managers was to have at least one year of experience in management of consultants, the average experience of the participants in management or supervision of consultants was 9.75 years. The research participants included members of senior management, project managers and project team leaders who have a minimum of 15 years of experience in the industry and who are knowledgeable about the practical problems and solutions on the investigated topic.

Following Miles and Huberman's (1994) suggestions for purposeful and snowball sampling, the initial participants were recruited through the researcher's network of business contacts and additional candidates were recommended by the existing participants. External ICT consultants are employed in many different types of businesses. For that reason, this research interviewed managers from different management levels who are employed in various types of organizations in order to increase validity and generalizability of the findings. Hence, the eight participating managers came from six different companies whose areas of business spans from government organizations, including bodies of three provincial ministries and one large municipal institution, to the communication technologies, and accounting and financial firms. With the intention of maintaining confidentiality, participants are named and referred to as only A1, B1, B2, C1, C2, D1, E1 and F1.

In order to facilitate inclusion of all theoretical concepts of interest in the gathered evidence, purposeful theory-driven sampling approach was used (Eisenhardt 1989b).

Thus, the content of five interviews was first examined to allow for the preliminary theory exploration. After the initial investigation and formulation of an early theoretical model, three more interviews were conducted in order to cover all important theoretical constructs. The research study participants were not paid for taking part in this research, but the results of the research were shared with them in order to provide an incentive for participation.

It is important to note that the sample was fairly homogeneous with a number of participating managers from similar situations, which are not necessarily representative of the management of all types of ICT consultants and managerial situations. Although the intent of the sampling was not to be able to make the findings genearalizable to the entire spectrum of the ICT consulting engagements, the studied sample was sufficient to explore the key concepts of the research questions and make the findings genearalizable to the population of the examined consultants, which are distinctively defined in Section 1.1, consultant roles.

3.5 Data Analysis Methods

This exploratory research study utilized coding and thematic analysis methods to analyze empirical data and generate the proposed theoretical model. Bhattacherjee (2012) describes coding as a method whose purpose is to identify, expose, and name the concepts and key ideas that are hidden within textual data, which can then be used to explain a social phenomenon of interest. Thus, during the coding process, a researcher examines words, phrases, sentences, and paragraphs of textual data and constantly compares them in order to identify similarities or differences (Glaser & Strauss, 1967). Thematic analysis enables a researcher to transform, encode and organize qualitative data into more abstract concepts and themes by identifying reoccurring patterns or themes (Boyatzis, 1998). Through the process of coding and thematic analysis, a researcher labels, describes and groups data into meaningful themes, categories and subcategories, which enables him or her to better comprehend the large volumes of data and generate rich and insightful information from this organization. Bhattacherjee (2012) explains that, in qualitative data analysis,

understanding of the phenomenon of interest heavily depends on the researcher's analytical and integrative skills, as well as personal knowledge of the social context from which the empirical evidence is collected.

Before analysis could begin, the gathered data first had to be prepared by transforming it into written text. Accordingly, audio recording of each interview was first transcribed and then loaded into NVivo qualitative analysis software for subsequent coding and thematic analysis. Excel tables were also used to keep track of demographics data of the research participants. This research followed an iterative coding and thematic analysis process (Creswell, 1998; Miles and Huberman, 1994; Strauss and Corbin, 1990; Eisenhardt, 1989b) and included the following major phases:

1. **Open Coding:** This is a first step in qualitative data analysis that leads to discovery of concepts or codes. The interview transcripts were processed in chronological order and empirical data was analyzed line by line to make sense of textual data by describing it with meaningful labels and definitions.

2. **Categories Creation:** The next step included logical classifying and grouping of concepts or codes into categories based on similarities and common properties of individually derived codes. This process included constant questioning, re-evaluation and refinement of the codes, which resulted in further division of categories into sub-categories to allow for a more detailed description of the data.

3. **Themes Formulation:** As the analysis continued, understanding of the data deepened and the derived categories were grouped into themes to create more abstract concepts. This led into development of an initial research model, which was later continuously revalidated and refined to reflect the new evidence. Visual sketching was used during the creation of the preliminary model.

4. **Axial Coding**: The following step involved making conceptual connections between categories and their subcategories and exploring causal conditions between them. This process was very valuable for further analysis as it included

additional revalidation and refinement of the derived codes and categories to make sure that labels and groupings are accurate. Through this process, a tree structure of categories and subcategories started to emerge.

5. **Selective Coding:** Strauss and Corbin (1990) describe selective coding as "an integrative process of selecting the core category, systematically relating it to other categories, validating those relationships by searching for confirming and disconfirming examples, and filling in categories that needed further refinement and development" (p. 116). Hence, the core categories of challenges and enabling practices were selected in order to identify a "story line" of the research.

The above described steps were repeated in several cycles, particularly during the phase of formulation of categories and sub-categories. For instance, after the preliminary categories were defined, they were continually modified, irrelevant ones were eliminated and new ones were added to reflect the new evidence. Accordingly, the derived codes and categories were reorganized until all the data was accounted for. The final coding structure that is attached in Appendix E was developed through data reduction, refinement of codes, and consolidation of the most essential and relevant categories. During the entire process of the above described iterative coding and thematic analysis, analytical memos were written to keep definitions and meanings of the derived codes, categories and themes. Moreover, these memos included a set of conjectures and questions about the data and emerging theory. The memos later served as a bank of ideas for the creation of the emerging theories and identification of categories and their properties (Ng & Hase, 2008).

Other documentary evidence such as companies' web-sites, follow-up emails and field notes were also used to supplement the results of the data analysis. It is also important to note that the last phase of the data collection process overlapped with the data analysis in order to allow for further refinement of the research model based on the new emerging themes until such time when no new major concepts were emerging, at which point a theoretical saturation was reached. In the end, the feedback was gathered from the participants with an aim of assessing the validity and usefulness of the research findings and the developed model.

3.6 Ethical Concerns

Any research that includes human subjects carries some potential ethical concerns such as a possibility of harming participants by asking inappropriate questions, revealing their real identities or not keeping the response information confidential. In order to address these issues and comply with the Ryerson University research protocol, an ethics review application was submitted for this research study and an approval from the Ryerson University Research Ethics Board for interviewing human subjects was received. The Research Ethics Board approval is attached in Appendix A.

Participation in this study was voluntary and participants were not compensated for taking part in this research. Potential participants were provided with the research information sheet and were given sufficient amount of time to review the research details, and to get back to the investigator with a response or additional questions. Before the start of the interviews, research participants were asked to give their agreement for participation in the research and for audio recording of the interviews by signing the research consent form, which is attached in Appendix B.

The real identities of the participating organizations and individuals were thoroughly disguised. Organizations and participants are only referred to by a sequential numbering system (e.g. organization A, B, participant A1, B1, B2, etc.). The real identities of the participating organizations and individuals are only known to the investigator. All of the information containing real identities of the participants will be disposed of after the conclusion of the study and all responses will be kept confidential.

CHAPTER 4: DATA ANALYSIS - CHALLENGES IN MANAGEMENT OF EXTERNAL CONSULTANTS

4.1 Introduction

Previous research (e.g. Dawson et al., 2010; Chen et al., 2009; Appelbaum and Steed, 2005; Lev, 2005; Wong et al., 2005; Kumar et al., 2003) indicates that a variety of difficulties can arise with management of external consultants in ICT projects. This does not come as a complete surprise because IT outsourcing is a special case of make-buy decision problems in which the boundary of an organization is distorted and there is a parallel partial loss of control related to opportunism and shirking over IT activities that are contracted out to an external service provider (Ngwenyama and Bryson, 1999).

The challenges with management of external consultants in ICT projects that were discovered in this exploratory research study are grouped together under the constructs from agency theory and transaction cost economics, which include: self-interest, information asymmetry, adverse selection, opportunism, asset specificity and uncertainty. Furthermore, this research study extends the above agency theory and transaction cost economics constructs with the new sub-constructs that are drawn from the empirical data. The results of this research are in line with the findings from previous studies that identified some individual challenges in management of external consultants. These challenges include: consultant short-term goals, consultant principal financial motivators, status update problems, knowledge transfer problems, truthfulness problems, capabilities mismatch, up-selling, getting into comfort zone, expiring contract problems, power of knowledge, work estimate problems, consultant arbitrariness, and challenges with new consultants. The following Figure 5 depicts the challenges in management of external consultants in ICT projects that have been identified from the empirical evidence and grouped together under agency theory and transaction cost economics constructs.

Figure 5: Challenges in Management of External Consultants

The above constructs are further divided into new sub-constructs that are explained in Sections 4.2 to 4.7 and their subsections, which contain each sub-construct's definition, explanation, supporting empirical evidence and linkage to previous theories, where applicable.

4.2 Self-Interest

Self-interest can be defined as one's personal interest or advantage or the act of pursuing one's own interest with disregard for others. Self-interest as a driving force that shapes behaviour of external consultants in ICT projects is in accordance with agency theory (Eisenhardt, 1989b). Evidently, if external consultants' behavior is primarily influenced by their own interests, and they do not provide much regard for the interest of their clients, it can be very challenging for managers in ICT projects to adjust their behaviour so that the interest of the projects are also satisfied. This research study operationalizes the concept of self-interest that may be exhibited by external consultants in ICT projects. Based on the empirical evidence, self-interest in the context of external consultants in ICT projects has been extended with two sub-constructs: short-term goals and principal financial motivators, which is illustrated in Figure 6.

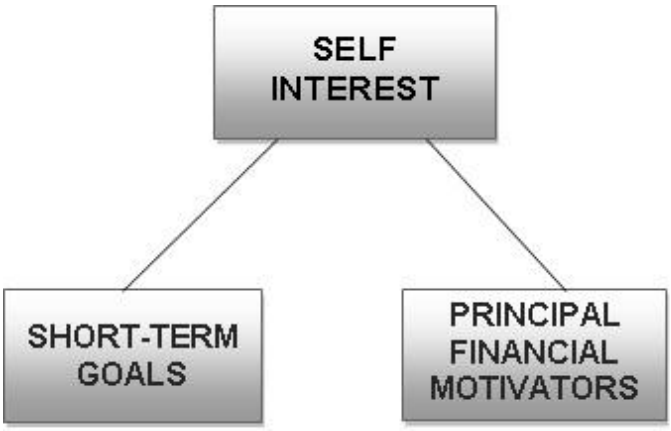

Figure 6: Self-Interest Challenges

Definition, empirical evidence, linkage to previous theory and explanation of short-term goals and principal financial motivators constructs are provided in Sections 4.2.1 and 4.2.2, respectively.

4.2.1 Short-Term Goals

Agency theory (Eisenhardt, 1989a) stipulates that by nature consultants and their clients have conflicting goals. The goals of these two parties need to be aligned to ensure success of ICT projects. External consultants are employed by the organizations on temporary assignments and their primary intentions may be to fulfill their own short-term goals, so they may disregard or overlook the long-term goals of an organization. Essentially, this means that external consultants surely want to complete the work that has been assigned to them so that their clients can see some immediate results and provide the payments for the completed work. However, the problem is that in order to get some immediate results and please their clients, consultants may take shortcuts and the long-term impact of their solutions may not be considered:

> C1: "So, they [consultants] do not necessarily have the whole perspective what will be needed for the next 5 years or 10 years. So, sometimes they tend to have this shorter view. They need to … they plan to deliver the particular functionality, but not necessarily how that functionality will be maintained over the longer period of time. So that is something that has to be instilled on top of say, just pure functionality. But how do we do maintenance of that? How is it maintainable? How is it … what's the overall cost of ownership, how much it will take for the operational teams to take it over and to maintain over 5 years or 10 years? … Just deliver it, so that it works at the beginning."

As interviewee C1 warns, little or no attention may be given to how the solutions that external consultants build will be maintained in the long run. In addition, external consultants' solutions may have a negative impact on other existing solutions in both technical and business sense. This may require additional work and incur additional time and costs even after consultants leave the projects. That is why it is important to build the right solutions with the long-term impact in mind, even if this means taking longer in the beginning because this approach will certainly pay off in the long run. Kubr (1993) points out that consultants may be especially prone on delivering visible short-term benefits and neglecting the long-term interest of the organization or even incurring severe losses in the future (e.g. by overlooking maintenance) when the fees are contingent on the work results.

Other consultants' short-term goals may include not making adjustments to produce a complete solution unless it is specified in the scope of work or potentially dragging their clients into changes of contracts in order to pursue additional financial gains:

> E1: "I mean the thing is very often, they would try not to do things that are out of scope of supply or scope of work. And basically they will try to engage you, you know, that potentially changing the scope of supply or scope of work, you know?"

This implies that external consultants may not be willing to do modifications that are not specified in the contract or they may ask for additional payments to accommodate the adjustments. This is understandable if big changes are required, however if only small adjustments are necessary consultants should be willing to work with their clients to resolve the issues because their inflexibility may do them more harm in the long run as they may damage relationships with their clients and diminish the likelihood of the future contracts. Previous findings suggest that cases where external consultants entice their clients into additional expenditures in ICT projects can be expected (McCarter, 2009; James, 1998). Consultants' dragging of their clients into potential changes of scope of work falls under the project scope management domain (PMI, 2013). Other consultants' short-term goals may include putting their own priorities such as personal time-off over the work priorities as they may not realize the impact of the work schedule:

> B1: "And you say I need you by this and this time and they [consultants] say I have some vacation schedule. Always, they're consultants … always their priority; their own priorities [are] over your work priorities."

Appelbaum and Steed (2005) found that consultants were not available over half of time for the implementation phases of the projects. More flexibility and care about the interests of their clients can help consultants build good long-term relationships with their clients.

4.2.2 Principal Financial Motivators

Jensen (1998) holds that in the organizational settings monetary incentives are primary motivators of human behavior. This can help explain some of the external consultants' behavior in ICT projects where they act in self-interest (Eisenhardt, 1989a) in order to maximize their financial gains without much regard for the interest of their clients or the projects that they work on. It appears that monetary rewards for external consultants in ICT projects can be very lucrative:

> B2: "Financial rewards [for consultants] are so much better than being full-time."

This may offer some explanation why many information and communication technology professionals may opt to work as consultants rather than full-time employees. Furthermore, empirical evidence from this research confirms that external consultants are primarily motivated by financial rewards:

> B1: "And consultants, they may stay for the shorter period of time; they are here and you need deliverables. You are paying the money and of course they … I wouldn't say everybody is money driven but, those people stay as consultants … for those reasons, yeah. Otherwise they would convert to full-time."

> F1: "Consultants are there and they are being paid well and it is a good gig for them to stay there."

The above empirical evidence suggests that financial rewards are one of the main motivators for external consultants in ICT projects and that they usually want to stay working for the companies as long as possible. The problem is that in order to maximize their financial gains consultants may be inclined to engage into actions that may not be in the best interest of their clients, such as introduction of new redundant workarounds and unnecessary new features and functionality (e.g. James, 1998) in order to be able to work overtime or get extensions of their contracts. Kubr (1993) points out that this can be especially problematic in the contracts where the time-based fees are set because of the lack of incentives to work more efficiently. For instance, he

points out that "occasionally you may even suspect that your consultant is working slowly and doing unnecessary things in order to stay longer and earn more money from you" (p. 126). Consultants' dragging of their clients into potential changes of scope of work falls under the project scope management domain (PMI, 2013). Since external consultants may be principally motivated by financial rewards, they may not care about the long-term interest of the companies that hired them and poor quality of their work may have a lasting impact on those companies' assets.

Interestingly, Jensen (1998) also argues that even though humans are evaluative utility-maximizes they have a universal tendency to act in non-rational manners because of the inherited brain structures. This implies that external consultants' primary interest in financial gains and overlook of their clients' interests may do them damage in the long run, meaning they will not be able to get repeated contracts even though that may be their chief goal. Next, exclusively financial motivators may not be enough for optimal performance of external consultants in ICT projects and other intrinsic motivators (e.g. Lambright, 2009) need to be utilized to bring out the best out of consultants. However, consultant may not be aware of this or may not even want this, but it is really up to the managers of ICT projects to provide other non-monetary incentives, such as making them feel valuable members of the team, to keep them happy and productive.

4.3 Information Asymmetry

Information asymmetry refers to situations in which different parties have different information at their disposal (Eisenhardt, 1989a). Dawson et al. (2010) point out that information asymmetry is widespread in IS consulting and can be exhibited by both consultants and clients. For example, they note that consultant use of tacit knowledge can expose clients to information asymmetry. This may be critical for ICT project managers because they are decision makers and they need to receive all relevant information in a timely manner in order to be able to make sound decisions. One of the most common problems is that members in ICT projects, including consultants, may not always provide complete or accurate project status information or

they may be reluctant to share bad and negative news (Goldfinch, 2007; Keil et al., 2004). The other issue is related to knowledge transfer problems, where consultants may withhold some important information when documenting and transferring knowledge that is required to support their solutions (e.g. Wong et al., 2005). Based on the empirical evidence, information asymmetry in the context of external consultants in ICT projects has been extended with two sub-constructs: status update problems and knowledge transfer problems, which is shown in the following Figure 7.

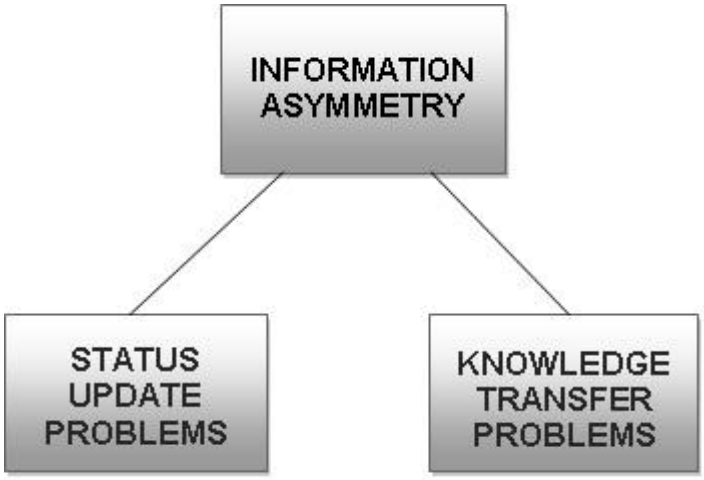

Figure 7: Information Asymmetry Challenges

Definition, empirical evidence, linkage to previous theory and explanation of status update and knowledge transfer problems with external consultants in ICT projects are provided in Sections 4.3.1 and 4.3.2, respectively.

4.3.1 Status Update Problems

Status update problems that may be exhibited by external consultants include not providing timely, accurate or complete project information and status updates, and reluctance to share bad and negative news. These problems of information asymmetry have been previously explored by Dawson et al. (2010), Goldfinch (2007) and Keil et al. (2004) in the context of complex ICT projects. Empirical evidence from this research

suggests that the problems with not providing accurate and complete status updates may be exhibited somewhat frequently by external consultants in ICT projects:

> B1: "I was thinking about this, maybe 4 out of 10 or probably 2 out of 5 you're going to have those types of consultants who are not providing timely and accurate status."

> C2: "Typically, it comes down to the communication side of the house when people try to summarize the information. But however, through that role of summarization of the information, sometimes they leave, loose out the key facts."

Leaving out some really important pieces of information when producing status reports can be done intentionally or unintentionally, but in any case it may create many problems for managers in ICT projects. Not having accurate and complete information about the status and work progress of external consultants can increase the risk of making the wrong decisions or can even create chain problems. This could be especially critical in ICT projects in which external consultants play major roles and others depend on their work. Next, empirical evidence from this research suggests that the problems with not reporting bad or negative news are manifested quite frequently by external consultants in ICT projects:

> E1: "Well, I would say it [reluctance to share bad news] happens on every project."

> C1: "Yeah, it can happen [reluctance to share bad news], it can happen somewhat frequently."

This can lead to additional problems for managers in ICT projects because the wrong assumptions may be made that everything is going well and according to the plan and when they realize that there are problems, some damage may already be created that will be costly or timely to repair. Sometimes, external consultants may try to portray the picture that even they were not aware of the problems:

> A1: "So, with the external [consultants] for example I mentioned that before where we had a scenario where they were not necessarily forthcoming with the delays that they were encountering even though it is hard to imagine that they were unaware of them, right? So, you know, they were trying to portrait the picture that everything was great and, you know, going very well, and it wasn't the case at all."

The reasons why external consultants may be not be willing to report bad news in ICT projects may be caused by the fact that they are uncomfortable or even afraid to report bad news because they may get blamed or punished in some way. Keil et al. (2004, p. 68) explain that: "agency theory assumes that an agent is work-averse or risk-averse and will report bad news only if necessary". Some managers may not want to hear bad news even if external consultants are not responsible for it. That is why creating the proper atmosphere which promotes and welcomes reporting of the bad and negative news is very important within an organization. Discussion on creating this kind of atmosphere is provided in Section 5.5.1.

4.3.2 Knowledge Transfer Problems

External consultants are brought to organizations to provide technical or business solutions and they are typically supposed to document these solutions and transfer the knowledge to internal employees who should be able to support these solutions after consultants leave the projects. Knowledge transfer can be achieved through creation of quality documentation, training sessions, working closely with internal employees or other mechanisms. However, knowledge transfer problems and poor quality of training provided by consultants is not uncommon in ICT projects (e.g. Wong et al., 2005). Empirical evidence from this research also suggests that knowledge transfer problems with external consultants are quite common:

> B1: "But, it does happen in quite a few cases. Um, they [consultants] just didn't want to continue to provide any documentation."

> E1: That is always a problem. So, that means at the end of the project there come lessons learned. Lessons learned must be documented. That means that I as a project manager make a list of lessons learned during the duration of the project. And I ask from them for the submittal, meaning what were the issues, what were solutions and what were the lessons learned? Very often those are incomplete and I have a problem from consultants to get that because they all think that documentation is basically overwhelming. Generally I've always struggled with this. Those lessons learned should be from the side of the consultant. Because basically I would never get that from him, the consultant, through the official communication."

The above evidence suggests that managers in ICT projects often encounter difficulties with external consultants when it comes to documenting and transferring knowledge and other important support information. For example, external consultants may create a business application but may not share the details of its internal workings or may make the internal code or workflow really difficult to understand. Sometimes they may do this on purpose so that their services will continue to be sought after. This is related to the "power of knowledge" problem, which is discussed in Section 4.6.1. Interesting results were revealed in the Dong-Gil's (2010) study, which found that personal or benevolent trust ("emotional'' bond among individuals) that is formed between consultants and internal employees has a significant positive influence in the knowledge transfer process, while competence trust (individuals' competence and responsibility) does not. This implies that the consultant's personality and attitude also play an important role for the successful engagements in ICT projects.

Furthermore, as interviewees C1 and F1 point out, the other reason for not providing adequate documentation may be that external consultants, especially the more technical ones, feel that writing documentation is tedious and they would rather be doing some other more interesting things, such as coding and developing business applications.

> C1: Technical people are little bit reluctant towards creating documents. They love doing coding, programming and such things, but they don't really like documenting that work. So that's one of the challenges in working with these people."

> F1: "I think it happens a lot [not documenting knowledge] … I think a lot of times they're brought in to do specific task and once that task it is done then they want to move on to more development, not on to any documentation."

However, it is crucial for managers in ICT projects to make sure that consultants are committed to writing quality documentation and transferring knowledge to internal team members, because this is a very important part of getting the most out of their engagements (Jackson, 2010). Still, it appears that writing documentation and knowledge transfer activities are often given lower priority, as it always seems that there are more important things to do. Kubr (1993) holds that a shortage of time, not a lack of interest, is the main obstacle in the knowledge transfer process. However, adequate time should be planned and allocated for the knowledge transfer sessions because once external consultants are gone "the opportunity has been missed" (Kubr, 1993, p.164), and there may not be anybody in the organization who knows enough about consultants' solutions to be able to support them effectively and efficiently.

4.4 Adverse Selection

Adverse selection refers to the situation in which an agent misrepresents his or her skills and capabilities, and in which a principal may not be in a position to verify the agent's claims before making a decision to hire the agent (Eisenhardt, 1989a). In the context of external consultants in ICT projects, it can be particularly hard to verify consultants' skills. For instance, in order to check consultants' technical skills, the clients themselves should possess the essential skills and knowledge in that area of expertise as well. However, often case the clients may not have the adequate knowledge about a particular domain and that is the reason why they need consultants in the first place. Because of the misrepresentation of skills and capabilities by external consultants who are applying to work in ICT projects, wrong hiring decisions can be made, which can result in significant losses of time and quality of work and additional costs incurred by the need to find and procure other more suitable consultants. Based on the empirical evidence adverse selection in the context of external consultants in ICT

projects has been extended with two sub-constructs: truthfulness problems and capabilities mismatch, which is depicted in Figure 8.

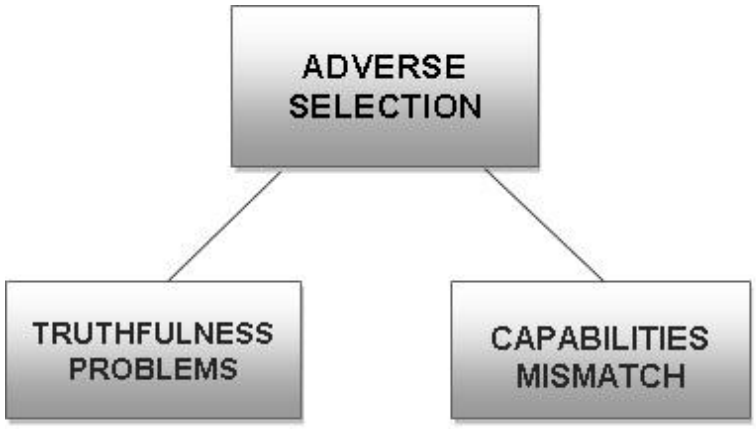

Figure 8: Adverse Selection Challenges

Definition, empirical evidence, linkage to previous theory and explanation of truthfulness problems and capabilities mismatch in the context of external consultants in ICT projects are provided in Sections 4.4.1 and 4.4.2, respectively.

4.4.1 Truthfulness Problems

According to the Oxford dictionary (1998) to be truthful means to be accurate, realistic or true to life. The problem is that what external consultants actually present on their resumes and during the interview process may not always be representative and accurate of their factual skills and talents. As a result of that, decision makers may be under the wrong impression that a particular consultant is skilled and proficient in a certain area. They may hire a consultant to work in ICT projects based on that wrong impression and only find out later that what the consultant presented as his skills and qualifications may have not been entirely true. The following empirical evidence provides examples of the truthfulness problems exhibited by external consultants in ICT projects:

> B1: "Another one is really the consultants' personalities or work ethics. So, for different things you have to deal with differently, right? So, for people who are just not capable to do their job, you document it, you give couple of chances … and then probably you just have to let go, right? Because it is really the skill side you're looking for - it is that people probably lied."

> B2: "Either didn't understand what was expected or they are just working under false pretenses. They do not have the skills that they say they have, they're not demonstrating it."

> D1: "And also when you talk about reports, you have to understand what is required for the developer to be able to read your document, business requirement document. If you do not put enough information there, you as a consultant that you claimed that you've worked and done these things before, you should know exactly what is required for a developer to do the work."

Empirical evidence suggests that situations in which external consultants are not entirely truthful about their skills is a real problem that managers face in ICT projects. Once such consultants are hired under false pretenses and by the time managers realize that, significant additional costs and delays may have been incurred. Possibly the quality of consultants' work was not at adequate levels or additional resources were required to redo some of their work. In some situations, these consultants need to be replaced. However, the new hiring and selection process means additional delays and costs. Therefore, hiring managers should pay very close attention to the selection of the right consultants during the interviewing and procurement process. However, this may not always be easy as some consultants have really good resumes and may leave an impressive performance during the interview process:

> F1: "The one that really comes to light is that consultant that has been brought in where you do not have a good feeling of is he as capable as other people think he is or is he not?"

As the above empirical evidence suggests, some external consultants may leave a strong impression and may portray a distorted picture that they are very capable in certain areas of expertise. Some people may eventually question that, but it may be too late as consultants are already working on the ICT projects. At that point, it may be very

costly and timely to procure another suitable consultant. The wrong hiring decisions should be prevented in the first place. Thus, Bajari and Tadelis (2001) point out that in order to cope with adverse selection and truthfulness problems competitive bidding and reputation verification techniques can be used. This is discussed more in Section 5.5.4, procurement and selection process.

4.4.2 Capabilities Mismatch

The problem with capabilities mismatch refers to the situations where external consultants who are contracted to work in ICT projects possess similar skills of what's required in a particular knowledge domain, but these skills are not the exact skills that are needed to efficiently solve business problems. One of the reasons that this problem occurs is because consultants may have misrepresented their skill sets in order to secure contracts (Eisenhardt, 1989a). The following excerpts from the empirical evidence illustrate how capabilities mismatch problems can be exhibited by external consultants in ICT projects:

> B1: "Number one it is like we consider that consultants' capabilities just do not match what we expected. Say, a consultant we hired, we expect our, we think ... we trust consultant has those types of knowledge, expertise, skills … right? Until the hands on, and you find out probably because some factors either in external for environment, we are not providing proper environment or they're just not skilled. They're good on their resume, but the hands-on experience doesn't match."

> F1: "Usually in development, there is more than one way to achieve the same task and if this person is stuck on something for a very long period of time it does not come across to me as someone being resourceful."

As it can be observed from the above empirical evidence managers may run into issues where their expectations of what the consultants should be able to do and their actual capabilities may significantly differ. As interviewee B1 noted perspective consulting candidates may appear to be very good at the interview process and may have convincing resumes, however when the hands on experience is tested in real

situations, they do not live up to the expectations. The above empirical evidence also supports the findings of previous research which points to the lack of experience (Appelbaum and Steed, 2005; Mohe, 2005; Wong et al., 2005) and competency issues (Kumar et al., 2003; Violino, 2005; Mingay and Peattie, 1992) among external consultants in ICT projects. Once these kinds of consultants are employed and working in ICT projects, managers have a choice to recruit and procure more competent consultants, but that may take too long or may be too costly and that point in time. Empirical evidence suggests that the other option is to keep them to complete the work, but not renew their contracts:

> C1: "But after a while you simply see who are really the quality ones and you tend to keep them because they are productive and they perform really well. And those ones who do not, they just go through our natural attrition. You just do not extend their contracts."

> D1: "Yeah, it happens. It happens to, with one of our consultants, but we didn't end up the contract, we just didn't renew [it]. We could renew it, but we didn't want because the quality of work was really poor."

This approach may not be ideal, but it may be the best that managers can do in certain situations where it is too expensive and timely to replace existing consultants or there are contractual obligations, which could be very costly if broken. Competitive bidding and reputation verification (Bajari and Tadelis, 2001) can also be used to cope with the capabilities mismatch problems.

4.5 Opportunism

Opportunism stipulates that people will act in self-interest and will take advantage of situations that are not well regulated and monitored (Williamson, 1975, 1985). For example, Dawson et al. (2010) explain that opportunism results from information asymmetry that creates an environment in which both clients and consultants behave opportunistically. There are many different ways and opportunities for external consultants to act in self-interest and take advantage of various situations in ICT

projects because of their complexities. Because of projects' complexities not all situations can be easily monitored and controlled or the clients may not possess all required knowledge in some specific areas and may not even know what needs to be monitored (Goldfinch, 2007). Based on the empirical evidence, opportunism in the context of external consultants in ICT projects has been extended with three sub-constructs: up-selling, getting into comfort zone and expiring contract problems, which are depicted in Figure 9.

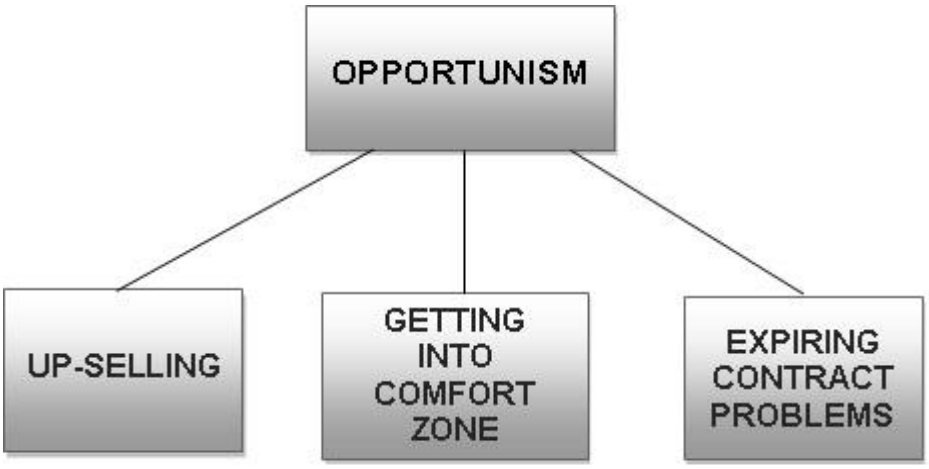

Figure 9: Opportunism Challenges

Definition, empirical evidence, linkage to previous theory and explanation of up-selling, getting into comfort zone and expiring contract problems in the contexts of external consultants in ICT projects are provided in Sections 4.5.1, 4.5.2 and 4.5.3, respectively.

4.5.1 Up-Selling

Consultant up-selling implies leading a client into additional spending by suggesting investing into something that may bring additional financial gains for a consultant or his/her associates. These more expensive items may include things like hardware and software upgrades, additional add-ons and functionality, introduction of additional reworks or more complicated and costly solutions that may not be necessary.

Sometimes, clients may not know what is required and what they really need and so they may let the consultants guide the entire ICT projects (e.g. Chen et al., 2009). For instance, the results of one study found that most of New Zealand organizations let their external consultants guide the ERP selection, implementation, as well as post-implementation activities (Hossain et al., 2002). Up-selling is related to the project cost management domain (PMI, 2013). The following extracts from the empirical evidence outline some examples of the up-selling behavior manifested by external consultants in ICT projects:

> F1:"There are things that maybe they have; they might have other things on their mind other than giving us the direct path to where we want to go. Stuff like up-selling and offering other products, offering other services."

> E1: "And basically they will try to engage you, you know, that potentially changing the scope of supply or scope of work, you know?"

> F1:"So I think a lot of times it is about possibly providing other services, possibly making, like sort of portraying that there is a need for this person's services and maybe getting extension. Maybe it is to bring in other people from their organization."

As the examples from the empirical evidence demonstrate, external consultants in ICT projects might be engaged in up-selling by describing that there is a need for extra products, additional services or engagement of additional personnel from their company. This is in line with James (1998) who pointed out that external consultants may be persuading their clients in ICT projects to buy additional products and features. Sometimes, consultants may just simply mention these extra products and services out there, and their clients may assume that these are valid suggestions since their consultants are the main and often the only subject matter experts. Evidence also suggests that external consultants may engage into opportunistic bargaining when they make their clients change the scope of work in their favor because they are one of the very few service providers or the cost of switching to another service provider may be too high (Williamson, 1975, 1985; Porter; 1985). In essence, through the above described behavior, external consultants in ICT projects are taking advantage of the

situations where their clients are not very knowledgeable about particular technologies and/or their needs so consultants are engaging into different forms of opportunism (e.g. Dawson et al., 2010). Besides taking advantage of being the only knowledgeable individuals in a particular domain and setting the rules of the game, external consultants may also engage in shirking because their clients may not be aware of what is really required to get a certain job done:

> A1: "Um, we had shirking definitely before, I would say that we did have one case where basically the person was aware that he was the only subject matter expert at that particular product and could basically tell us whatever he wanted."

It has to be noted, however, that consultants' up-selling, may bring additional value to the projects, provided that it is managed properly. For instance, Jackosn (2010) notes that when consultants start proposing additional things that they can do for a client, they should be politely but firmly refocused on first finishing the work that they already started.

4.5.2 Getting into Comfort Zone

External consultants may be very productive when they first start to work in ICT projects, however empirical evidence suggests that they may get into the comfort zone after a while and their performance may go downwards because they will find more ways to shirk or avoid work and responsibilities. This problem is related to shirking, which can also be considered a form of opportunism (Dawson et al., 2010). Previous research reveals that shirking is a real problem that can affect individual performance (e.g. Ngwenyama & Bryson, 1999). The following excerpts from the empirical evidence illustrate the problem where external consultants in ICT projects are getting into the comfort zone and starting to exhibit shirking.

> B2: "It affects their performance in that they become, not so much complacent, but they become involved. They start to create friendships with the full-time staff … but in the past I have found consultants would

> get, would start to behave like full-time staff. And so, you know, the breaks would increase and productivity would drop off because now they are mimicking their full-time counterparts."
>
> E1: "I have a feeling that besides the initial learning curve, you know there is a level of comfort that consultants feel. And with the challenges of the tasks that are coming for them, you know, that they are getting into the comfort zone. Basically, their efficiency is shortening."
>
> F1: "I think the longer they stay probably the more comfortable they get."

Empirical evidence suggests that after a while external consultants in ICT projects may get more comfortable and may find more opportunities to engage into shirking. This includes getting accustomed to the organizational culture and starting to behave more like the full-time employees, which may include spending more time on the non-work related activities such as socializing, longer breaks and creating friendships. This is not acceptable for the external consultants who are brought to work on temporary projects and who are expected to continue providing high performance.

To summarize, empirical evidence suggests that the length of consultants' contracts may have a negative impact on their performance. In order to keep consultants fresh and performing at a consistently high level, the practice of limiting the length of how long external consultants stay within an organization may help with keeping up their desired performance levels. Limiting length of contract as one of the enabling management practices is discussed in Section 5.5.3.

4.5.3 Expiring Contract Problems

Another form of shirking and opportunism may be manifested by external consultants when they learn that their contracts will be expiring soon and there will be no extensions. At that point in time, the amount of effort and diligence that they put into projects may be diminishing. They may be upset that their contracts are closing (sometimes even before it is expected) or their focus and attention may already be at looking for other employment opportunities. The following examples from the empirical

evidence demonstrate that external consultants in ICT projects may really create problems when they find that their contracts are coming to an end:

> D1: "They do not want because they do not care or they know the end of their contracts is closing ... it is close so they really do not care anymore."

> A1: "If a person is being laid off on the other hand, or if the project is being terminated, maybe you know, before, earlier than they expected then they might not be so forthcoming with knowledge transfer. And we've had cases [where] they would miss meetings; they wouldn't document everything that needed to be documented and so on."

> D1: "Yeah, and knowing that their contract expires like in three weeks, they do not put too much effort."

The above examples from the empirical evidence point to professionalism and ethics problems with external consultants because when their contracts are close to expiring they may start behaving unprofessionally and not continue putting in the agreed upon work effort for the rest of their contracts. This behavior may also be counterproductive as consultants may damage relationships with their clients and thus diminish the likelihood of future contracts with these same clients. Consultants will usually ask for extensions of their contracts and when they find out that there will be no extensions their performance significantly drops:

> D1: "They know that their contracts expire. Usually they ask for extension, right? And when they find out that the extension is not coming then you see the curve, like [going down]"

> B1: "You say I will let you go at the end [of contract] or whatever. The less attention you pay it may make things even worse. And even one way they may say that you either didn't know … consultants you didn't know or they say: 'you know what, I make my money, when they let me go, they let me go.'"

This raises a question of when a manager in an ICT project should let the external consultants know that their contracts are coming to an end. In order to minimize consultants' shirking, managers could possibly let consultants know about the

closing date of their contracts at the latest reasonable time, which is ethical and in accordance to what is already specified in a contract to this regard.

4.6 Asset Specificity

Williamson (1975, 1985) defines asset specificity as a degree of relatedness of assets to a particular investment and obstacles in exchanging those assets for something else. He holds that asset specificity is the major cause of the transaction costs because its effects are the most difficult to alleviate. Asset specificity may create predisposition for opportunistic behavior. In the context in IT consultancy, asset specificity problems may emerge in situations where external consultants possess some specific knowledge or expertise in a particular domain and they exploit that position by dictating and controlling development of events, often even without their clients being aware of it. Based on the empirical evidence, asset specificity in the context of external consultants in ICT projects has been extended with two sub-constructs: power of knowledge and work estimate problems, which are depicted in the following Figure 10.

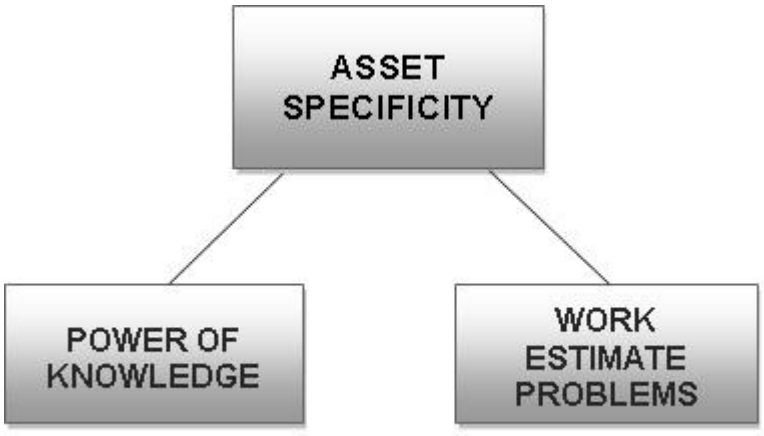

Figure 10: Asset Specificity Challenges

Definition, empirical evidence, linkage to previous theory and explanation of power of knowledge and work estimate problems in the contexts of external consultants in ICT projects are outlined in Sections 4.6.1 and 4.6.2, respectively.

4.6.1 Power of Knowledge

Power of knowledge may be manifested by external consultants in ICT projects in situations in which they are among a few or the only subject matter experts and they take advantage of this situation by withholding knowledge and information so that they can be in control and in a position to orchestrate future development of events. Their clients may or may not be aware of this. Even if they are aware of this, they may not be in a position to easily replace or exchange consultants because there may not be any other ones who possess this specific knowledge or they may be heavily dependent on them and any replacements in the middle of the projects could prove to be really costly and risky. Power of knowledge is related to the problem of asset specificity (Williamson, 1975, 1985) in which consultants possess very specific assets such as specialized expertise and they cannot be replaced quickly or easily because of the associated exit costs (Joskow, 1988; Klein, 1988), including the time and investment required to find, recruit, negotiate contract with, and bring a new consultant up to speed. The following empirical evidence demonstrates that the power of knowledge problem as manifested by consultants can create various challenges for managers in ICT projects:

> C2: "And they felt, I guess a little bit of the older corporate type of mentality where knowledge is power."

> B2: "Knowledge is power. And if they don't share it then maybe you will ask them to come back and do some more work in that area."

> C2: "I think it really just comes back to some individuals' belief that knowledge is power and they think that if they make themselves an asset that can't be replaced in an organization they'll be continuously or continually employed or reemployed, reemployed on multiple contracts and it is a job security thing."

The Pozzebon and Pinsonneault (2012) have already stressed that power and knowledge are closely intertwined and this needs to be considered when understanding the consultant-client relations. In fact, the inseparability of power and knowledge in the context of ICT projects and consultants has been previously put forward by Jones (2003) and Sturdy (1997), but this concept is especially prominent in the research of

Bloomfield (e.g. Bloomfield and Danieli, 1995; Bloomfield and Vurdubakis, 1994; Bloomfield and Best, 1992), who holds that sociopolitical and technical skills cannot be separated as they are very tightly coupled.

Again, the power of knowledge problem can be especially expected in situations where only limited source of consultants who are experts in a particular area is available to their clients. In other words, the bargaining power of suppliers increases as their number decreases (Porter, 1985). At times, external consultants may not be willing to share their knowledge because they are afraid that they are giving out their "know-how" and business and other proprietary information:

> E1: "And I know that they have certain steps and very often they will say 'well if we disclose the steps below, you know we are basically disclosing our business process.' It is basically the 'know-how'."

> B1: "They just say I'm just working this way, I do not want to leave my knowledge behind."

> F1: "And I can only think that the longer that they stall on that the more we're going to be dependent on them when we need to deliver this."

The main problem with power of knowledge is that it can have a chain effect and create shirking, status updates, progress verification and knowledge transfer problems. The power of knowledge problem may be very difficult to deal with if the number of consultants who can carry out some specific tasks is limited. For this reason, managers in ICT projects should exercise stricter project risk management (Nelson, 2007; Masticola, 2007; Wong et al., 2005) in order to avoid situations where consultants may be getting them in a difficult position but managers depend on them and cannot replace them easily.

4.6.2 Work Estimate Problems

Another problem that is related to asset specificity is the issue that managers run into because of their inability to verify or challenge work effort estimates that external

consultants provide in ICT projects. External consultants are often the only ones who possess a particular knowledge in a specific domain and there may be no other internal resources who are experts in this area so that they can correctly assess if consultants' work estimates are accurate. For example, this situation may create propensity among highly specialized software consultants who may take advantage of it and provide work estimates that are much longer in duration than what is actually realistic. The following excerpts from the empirical evidence suggest that the work estimates that may be provided by external consultants in ICT projects can be really difficult to verify:

> B1: "Because they are consultants and you assume them to have skills, to have capabilities to deliver some task. You have to rely on their work estimates. And nobody else has the, you know … the expertise to say that is wrong even you feel that does not make sense."

> D1: "You have to … and you need also technical skills in your area. Otherwise, they can tell you whatever and they can give you estimates that are completely off. And you know exactly, if you know if you are in the business, and you ask them 'okay, how long is going to take you?' 5 days! No this is a 2 hour job. I know exactly, you are making it up now."

> B1: "When they provide work effort you say 'I think, you know, it should be lower', but they could just say, 'you know what I've been working on this for years. So, you know what, I'm the consultant, trust me, that's it.' So, how to justify that? Isn't that challenging to you … you may get in 3 months and you may get in 3 years, right?"

The above empirical evidence supports the previous findings (e.g. James, 1998) that point to challenges in verifying work estimates that are provided by external consultants. Often managers or even other internal employees may not be experts in a particular area. For example, interviewee D1 notes that if managers do not also possess technical skills in a particular area consultants can provide whatever estimates they want. This implies that having technical skills may help managers in management of external consultants in ICT projects. However, this may not always be practical and feasible. Even if managers possessed technical knowledge in a particular area, technology is changing so rapidly that it may be hard for them to keep up. For example, participant B1 points out the following paradox:

> B1: Like you know, you have to do lots of research and that means like actually making yourself become an expert ... That is really challenging to manage the consultants' work estimates."

However, organizations should ensure that at minimum they have some internal employees who managers can rely on to verify consultants' work estimates. That is why it is important for organizations to invest in development and training of internal staff.

4.7 Uncertainty

Williamson (1975, 1985) explains that in the transaction cost economics, uncertainty is related to unpredictability of future events and actions of other parties in a contract. In the context of external consultants in ICT projects, uncertainty refers to the problems of unpredictable behavior of external consultants and the unknowns of working with the new consultants. Based on the empirical evidence, uncertainty in the context of external consultants in ICT projects has been extended with two sub-constructs: consultant arbitrariness and challenges with new consultants, which is shown in the following Figure 11.

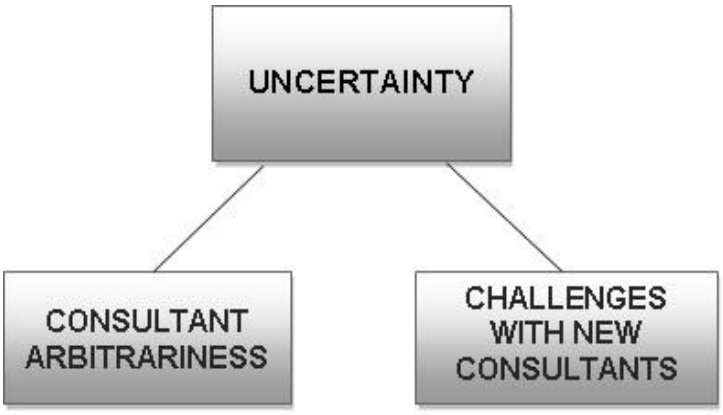

Figure 11: Uncertainty Challenges

Definition, empirical evidence, linkage to previous theory, where applicable and explanation of consultant arbitrariness and challenges with new external consultants in ICT projects are provided in Sections 4.7.1 and 4.7.2, respectively.

4.7.1 Consultant Arbitrariness

According to the Oxford dictionary (1998) the word arbitrary is defined as something that is based on the unrestricted will of a person, not according to a scheme or plan or something that is established at random. When it comes to the consultant arbitrariness in ICT projects, this construct is concerned with consultants' choices and actions that are subject to their own will, opinion, judgment or preference and are not in line with the project plans or given instructions and expectations. Consultants may act in their own way and disregard or overlook what their clients are asking them to do, and what the project priorities and needs are at the moment. The following empirical evidence describes the problems with external consultants' arbitrariness in ICT projects:

> F1: "Sometimes you give them instructions, you give them guidance on how you want things to be done, but they still have their own thoughts and they want to go about things their own way."

> C2: "What I'm trying to say is that you can't have a consultant come in, do what they want, work on their own guidelines and deliver some sort of deliverable that can't be verified by the organization in terms of its quality, accuracy and completeness."

> B1: "They are consultants, they're strong skilled, they have strong one side and even with your requirement they just do not think you're doing it right? So, they're doing their own way. Yeah, even you provide [instructions] and say - they think that is the stupid requirement."

The above empirical evidence suggests that consultant arbitrariness may be manifested in many different ways. They may think that their ideas and ways of doing things are better than what their clients are suggesting or that some tasks are not important. Consultants may provide blanket solutions without adequate customization

(Mitchell, 1994), or simply it may be easier for them to use the prepackaged solutions that they are familiar with and that they have used in the previous assignments (Mingay and Peattie, 1992). At other times, consultants may behave in unpredictable ways because they may not be happy with the work load or they may have acquired different ways of doing things while working in different business sectors.

> E1: "Very often those are incomplete and I have a problem from consultants to get that because they all think that documentation is basically overwhelming."

> B1: "But if they came from the different business sectors, they just think that is stupid … then they took the assumption."

Pozzebon and Pinsonneault (2012) explain that consultant` work methods and techniques are drawn from years of experience of working for different companies and as such are partially grounded to provide a generic or global perspective. However, (Pozzebon and Van Heck, 2006) warn that overreliance on global approaches may not produce optimal results. In other words, while external consultants may have good approaches and suggestions, not all of their approaches or ideas produce the best possible solutions in all cases. Consultants' arbitrariness problems can also be related to the professionalism and personality issues. That is why it is really important to select the right consultants who possess not only the required skills, but who are also professional and will fit well in the working environment. The consultant procurement and selection process is discussed in more detail in Section 5.4.4.

4.7.2 Challenges with New Consultants

Another condition where uncertainty plays a role is the situation when new consultants are brought to work in ICT projects. They may be inexperienced, employed fresh from school or they may have no experience in a particular industry (e.g. Wong et al., 2005; Appelbaum and Steed, 2005; Mohe, 2005; Vogl, 1999; Mingay and Peattie, 1992; Kelly, 1997). Basically, ICT project managers may not know what kind of a

consultant they are getting and it may take a while before they figure out if a decision to hire a particular consultant was good or not. Significant amount of time might be required for this and it may not be easy for managers to become aware of the quality of the consultants' work until much later in a project. Below are some examples from the empirical evidence that describe challenges with new consultants in ICT projects:

> B1: "To us, it is the unique challenges will be just like I said, the external consultants are from different business sectors, right? And they just couldn't understand why we have the rules and policies."

> D1: "I had problems with consultants that were not …they were not understanding the business that we are at. They were coming from another background and they couldn't understand and comprehend what the business is in our place."

> A1: "There are a lot of decisions that are historical, there are some legacy systems and obviously having knowledge of that does help. And it is a specific sector too."

The above empirical evidence provides examples of challenges in ICT projects where new consultants do not have experience in a particular sector or they do not understand company's rules and policies. The other issue that managers should be aware of is that there is a learning curve and that external consultants cannot usually become productive right away. They first need to acquire knowledge of the legacy systems and internal workings and organization of the work in a company.

> C1: "Um, okay, so usually there is some learning curve at the beginning. There is some ramp up period for any consultant no matter how qualified or experienced they are."

> F1: "And I think that is a sort of, there is a learning curve for sure when he comes on board and you get to know how they work and what they can deliver."

So, the challenge is when managers hire new consultants to work in ICT projects they cannot be sure what kind of consultants they are getting even though they seem to

be very good at the interview and during the selection process. Alternatively, if managers look for adequate resources among internal employees whose skills and potential they know, they may significantly reduce the risks. This is another good reason why managers should look for internal talents first and try to develop internal alternatives (e.g. Mohe, 2005; Baker and Faulkner, 1991). In the situations when organizations must employ external consultants to work in ICT projects, they may want to work with consultants who they have a history of dealing with from before. This practice is discussed in more details in Section 5.4.4, procurement and selection process.

CHAPTER 5: DATA ANALYSIS - ENABLING PRACTICES IN MANAGEMENT OF EXTERNAL CONSULTANTS

5.1 Introduction

Although external consultants may be contracted to ICT projects because of their skills and expertise, they may not always provide adequate value if effective consultant management is not in place. One of the main goals of this exploratory research was to uncover and describe management practices that can enable managers to effectively supervise external consultants in ICT projects. These enabling practices are grouped together under the constructs from agency theory and transaction cost economics, which provide a fertile ground for grasping and understanding the phenomena of interest. These constructs include: monitoring, controlling, governance, incentives and contract management, and building relationships and trust.

Moreover, this research study extends the above agency theory and transaction cost economics' constructs with new sub-constructs, which are drawn from the empirical evidence. A lot of the findings from this research are in line with the previous theories. This research, however, provides further extension of the management practices that can enable managers in ICT projects to deal with challenges in management of external consultants. These management practices include: frequent follow-up, usage of multiple information sources, peer review, direct face to face management, expectations setting, multiple progress verification, deliverables management, procurement and selection process, creating proper atmosphere, limiting length of a contract ,payment control, and building relationships and trust. The following Figure 12 illustrates enabling practices for management of external consultants in ICT projects that have been identified from the empirical evidence and grouped together under agency theory and transaction cost economics constructs.

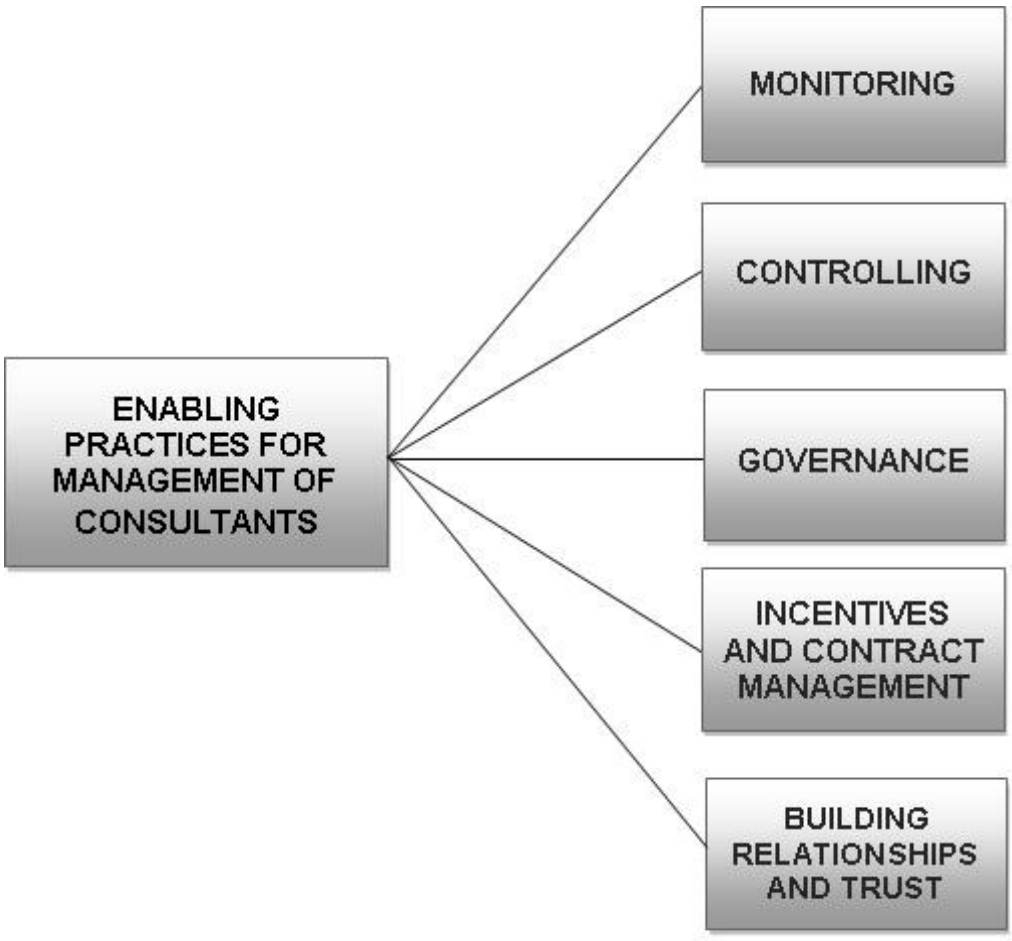

Figure 12: Enabling Practices for Management of External Consultants

The above constructs are broken down into new sub-constructs that are explained in Sections 5.2. to 5.6 and their subsections, which contain each sub-construct's definition, explanation, supporting empirical evidence and linkage to previous theory, if applicable.

5.2 Monitoring

In order to cope with the challenges in management of external consultants in ICT projects, managers first need to have full information and evidence into what the consultants are actually doing. This can be achieved through monitoring mechanisms,

which can increase consultants' accountability and performance (Liberatore and Luo, 2010; Mahaney & Lederer, 2010; Jackson, 2010; Ngwenyama & Bryson, 1999; Baker and Faulkner, 1991). This implies that companies need to spend money and invest in information and monitoring systems in order to eliminate or reduce opportunistic behavior. This is in accordance with the transaction cost economics, which stipulates that parties in a contract should not expect to have both low price and contractual safeguards (Williamson, 1985). Monitoring consultants' work falls under the project integration management domain (PMI, 2013). Based on the findings from empirical evidence, monitoring in the context of external consultants in ICT projects has been extended with two sub-constructs: frequent follow-up and usage of multiple information sources, which is depicted in Figure 13.

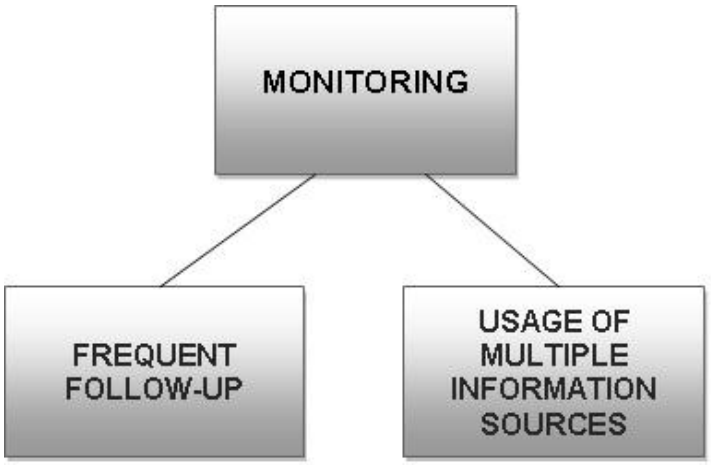

Figure 13: Monitoring Practices

Definition, empirical evidence, linkage to previous theory and explanation of frequent follow-up and usage of multiple information sources practices that can enable managers to cope with the challenges in management of external consultants in ICT projects are provided in Sections 5.2.1 and 5.2.2, respectively.

5.2.1 Frequent Follow-Up

Frequent follow-up with external consultants can enable managers to get better awareness of what consultants are actually doing. This management practice is very important because it addresses many of the challenges with external consultants and affects most of the other management practices. Frequent follow-up requires daily communication with consultants. Jackson (2010) confirms that monitoring progress and asking for brief updates on where a projects stands is important for the effective management of consultants. Not only does this give an opportunity to project managers to get a better picture of the work progress and issues, but it also presents a chance for managers to provide the necessary assistance and support to help consultants carry out the project tasks effectively and efficiently. Frequent follow-up does not necessarily mean a set of scheduled formal meetings, but rather it implies a series of informal meetings where a manager goes to a consultant and spends time talking to him or her. Not only does this help in finding out about the work status, but it also increases individual accountability and reduces shirking (e.g. Mahaney and Ledeer, 2010). The following interview extracts provide empirical evidence examples of the frequent follow-up practices that are employed by managers in ICT projects:

> C1: "Day to day, face to face interaction - nothing can replace that. Let work, be in your consultants' cubicle, speak with them, understand, speak openly with them and enforce or just encourage transparency."

> B2: "I guess one of the reasons why I haven't had that issue was again because of constant meetings and constant rehashing of what the tasks are, how they are going to be accomplished, how long they should be taking, and then a sort of verification of what's supposed to be completed."

> E1: "Yeah, like email, phone calls and... Basically, at my end I am trying to put as much diligence as I can on a task management and basically following up on the action items. Assigning stakeholders, you know making clear who are the stakeholder on any single action task that is needed. And following up with them throughout either direct protocol or either through the organizational protocol."

> F1: "I would say I'm typically pretty involved with development cycle. I like having interactions, I usually do come by once a day at least to see how it is going and making sure everything is on track. And I found that just from experience by doing that I have a better success rate because I know where we are, I know where we have to go and I know who I'm working with."

> C1: "On a more non-standard side or informal side it's actually daily conversation with consultants. I just go by and say how are we doing with this particular task and basically construct the picture and the feeling are we on the right track or not."

As it can be seen from the above interview excerpts, frequent follow-up can enable managers to find out where the projects are at and what else needs to be done to complete all assigned tasks on time and according to the plan. It also provides an avenue for demonstrations and seeing the work in progress from first hand. Furthermore, frequent follow-up can enable managers to spot issues early on before they mushroom into much bigger problems. This gives the manager a chance to direct work and correct consultant behavior to make sure they stay on the right track.

> A1: "I would say it comes to the follow-up. If you just rely on documentation you are more likely to get into that scenario. But if you're working closely with consultant or developer or vendor and you get proof of concepts and you have regular touch bases and you talk about all these scenarios it is far less likely to happen because you get visibility into it early on."

> C1: "And again day to day checkups, monitoring … spend time with them, ensure that other team members, full-time team members, project managers spend time with them so that there is absolute visibility in what they are doing. Um, that is how to ensure that they stay on course and do what is expected for the project."

> B2: "But what I found there, again, because of the fact that we are meeting on a fairly regular basis, it wasn't a situation that was beyond repair. That these activities are falling back and so we managed to correct that because we knew about it."

Empirical evidence suggests that frequent follow-up can be a very effective practice in management of external consultants in ICT projects. It also proves that managers should not only rely on the official channels of communication, but they should also be working closely with the consultants on a daily basis to get a better picture of the real situation. Frequent visits and discussions with consultants give managers a chance to communicate, clarify and repeat what the priorities and tasks are and thus reduce misunderstandings. More effective monitoring mechanisms such as frequent follow-up can increase consultants' accountability (Liberatore and Luo, 2010; Baker and Faulkner, 1991) and decrease their shirking (Mahaney and Lederer, 2010; Ngwenyama and Bryson, 1999; Eisenhardt, 1989a).

To summarize, managers need to interact and spend time with external consultants, whether that means going to their cubicles or organizing meetings. However, frequent follow-up require a lot of time and diligence from the project managers. This needs to be taken into consideration when planning and allocating managers' time. In any case, the time and effort spent on frequent follow-up will certainly pay off in the long run.

5.2.2 Usage of Multiple Information Sources

Companies can invest in various monitoring mechanisms to get a better outlook on the actions performed by external consultants and consequently minimize their shirking (Ngwenyama and Bryson, 1999; Eisenhardt, 1989a). This means that multiple sources of information can help managers in ICT projects to find out about the project status and work progress of the external consultants. Usage of multiple information sources can enable managers to put the pieces of a puzzle together by drawing information from a variety of different sources and looking for reliability and consistency of that information. This implies that managers should use all available sources in information that can help them construct a better picture of the work progress and issues and thus enable them to make better decisions. The empirical evidence provides examples of how managers can utilize information from multiple sources:

> E1: "The reason to prevent that and to figure out what is going on is constant communication either over the phone or over the email and trying the get the same information from different sources [and] basically compare them. Either compare them or try to, you know basically asking for the same thing twice or three times to look for consistency of information and to look for consistency of status updates provided from the different sources."

> A1: "For example, I would try to engage a PC [project coordinator] to get the status more specifically or BA [business analyst] to review their other deliverables such as run logs and so on to make sure that they are accurate and complete and to check on the status."

> D1: "But you have to watch carefully. You have your method, you go to the other manager and ask 'what's his top priority, can you let me know?'"

As the above examples indicate, if managers want to check for consistency of information provided by external consultants they may need to collect that information from different sources and basically compare them. A different source of information can be other internal employees and managers who are also working with these consultants. In addition, the other information sources may include work logs that may be available in different forms.

> B1: "Usually you need some kind of tools, right, to manage... one way you have, say, simple like the word document for the working logs, right? Or spreadsheet, it does not matter or through other tools like the code management, like the source code management tools. You always can see how much work is being done. How many lines of code, right? Or … and the time management system, also for project management, right? When they put timing against this, you can see achievement, like how much percentage it is complete. You need to use tools."

The work logs may include different forms of documents and actual software packages that keep track of the work progress history of what has been done. These software packages can be source code management system, project management system or actual application logs, which can all provide insights into the actual reality of the consultants' work. The problem is that information that is contained in these different systems is usually isolated and it may not be easy for managers to extract all the

required information. Therefore, different information repositories should be consolidated or one amalgamated report should be generated for managers to give them full access to all available information. This would enable them to make more informed decisions and act in a timely matter when different situations necessitate actions to be taken to mitigate the risks and facilitate smooth project development.

5.3 Controlling

Controlling and directing external consultants' behavior is another important mechanism that managers of ICT projects can engage in if they want to make sure that consultants stay on track and deliver according to the project plans. According to agency theory (Eisenhardt, 1989a) principal can try to control agent's actions, but this may not always be easy to do. That means that it is crucial for project managers to find effective controlling mechanisms and practices that will enable them to successfully direct and correct consultants' actions and behavior to ensure that they stay on the right track. Controlling consultants' work falls under the project integration management domain (PMI, 2013). Based on the findings from the empirical evidence, this research identified two controlling practices that can help managers control consultants' behavior. These enabling practices are peer review and usage of multiple progress verification, as illustrated in Figure 14.

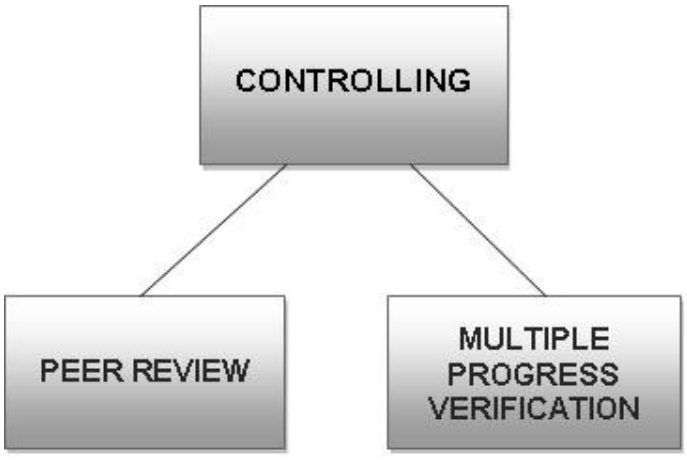

Figure 14: Controlling Practices

Definition, empirical evidence, linkage to previous theory and explanation of peer review and multiple progress verification practices that can help managers to deal with challenges in management of external consultants in ICT projects are provided in Sections 5.3.1 and 5.3.2, respectively.

5.3.1 Peer Review

Peer review refers to all techniques where consultants' peers (e.g. internal employees) are engaged to check, report on and guide consultants' work. Peer review is a very powerful practice that can be used for controlling and correcting consultants' actions. For example, if internal employees work closely with external consultants they can provide more accurate status updates. Next, peers can improve communication between the consultants and management and they can reduce misunderstandings by clarifying the tasks and goals. Furthermore, peer review can be used as a quality control mechanism, which can be constantly engaged to check the quality of consultants' work. Usage of the peer review as a quality control mechanism falls under the project quality management domain (PMI, 2013). Peers can also improve documentation and knowledge transfer problems if they work closely with consultants and they acquire specific information and knowledge. Finally, peers can act as partners to external consultants and thus facilitate effective and fruitful execution of the consultants' tasks. The following are some of the examples from the empirical evidence that demonstrate how peer review management practices can be used by managers in ICT projects to control external consultants' behavior:

> C2: "In a little bit more of a technical world, um, it is shadowing, providing direction, working with consultants in order to be able to obviously develop various pieces of the solution or code. So they do very much work on a day-to-day basis."

> B1: "Yeah, so we do say, we talked about inspection, we inspect tings, right? Peer walkthroughs, like the code checking, everything and verify if the things, functionality is there."

> B2: "In the case where it is an application that they are building, they're the primary developer on it, and it is the full time peer who will be supporting that application, and is there to assist to verify that the application does what it needs to do and that it meets the business needs."
>
> D1:"We have process called peer review. So whenever they do something another person in our team is reviewing the other person's work… So they have to write a report, like this is missing from this code, this is not as per our standards. So they have to follow some standards and rules and in this peer review we usually do not get into that situation that we, that consultant deliver something that is completely out of normal."
>
> A1: "So we have for example, one developer working on one component, another developer working on another component. I think if we had 2 developers, for example, per component or even if they just shared some skill sets then there could be independent verification for each other."

As shown in the above examples, there are many different situations in which managers can use external consultants' peers as an effective controlling mechanism that can help with ensuring that external consultants follow given direction and act according to the ICT project plans. In cases when consultants get off track and start moving in an undesirable direction, peers can be used as an effective controlling and coordination mechanism (e.g. Liberatore and Luo, 2010; Ngwenyama and Bryson, 1999; Eisenhardt, 1989a), which can help correct consultants' actions and remind them of the desired direction and work priorities. However, in order to achieve these goals, peers need to spend time with consultants and work very closely with them. What is more, internal employees' shadowing of external consultants can be an effective approach for knowledge transfer (Chen et al., 2009). Indeed, empirical evidence suggests that it may be a good practice to always assign internal employees to work with external consultants. What is more, internal employees can oversee the work of external consultants and be actually responsible for deliverables and quality of their work. This is related to deliverables management practice, which is discussed in Section 5.4.3.

5.3.2 Multiple Progress Verification

In order to direct external consultants' actions, managers need to be aware of their work progress so that they can take timely corrective actions to remedy the problems before they get out of control. Not only can managers perform personal progress verification, but they can also utilize other progress verification techniques, such as obtaining work progress information from team members and other internal employees, and having regular progress verification cycles and demonstrations. Multiple progress verification can equip managers with the information that is required to control consultants' actions (e.g. Ngwenyama and Bryson, 1999; Eisenhardt, 1989a). Furthermore, multiple progress verification management practice can also be used as a quality control mechanism. When the work progress is verified, quality of the work can be checked as well. Usage of multiple progress verification as quality control mechanism falls under the project quality management domain (PMI, 2013). The following include examples of the empirical evidence that demonstrates how multiple progress verification practice can be employed by managers in ICT projects:

> C2: "There is always something that is done as predecessor to staring the deliverable and throughout the deliverable what's very key is that we do internal checks against that acceptance criteria making sure that we do not get into a state where somebody says 'okay, my deliverable is done', but the owner of that deliverable or the receiver of that deliverable says 'well, we have total misalignment.' So, we typically follow a 5, 25, 50, 75, 100 % review, where the 5% review is a very upfront look at the deliverable that confirms a table of content and directionally looks at that deliverable to make sure that it is correct. And then we do content-specific review throughout the course of the deliverable, depending on what it is."

> A1: "So for those cases, we try to then have proofs of concepts or something visible that can be shown to us. That we can have a sense that it is really completed. Or we can ask for a walkthrough. So we do try to get a better picture without relying on just on statements."

> B1: "Sometimes you have to be in person to track down and see what was really the progress. You see what I mean? Lots of times people can say send me an email to confirm. So they think they got evidence of what they got. But it just can't, the best way is still to see from your [own] eyes."

> D1: "And me as a manager, as a project manager, I cannot state … after the data is loaded and all the reports are promoted and deployed into environment, I cannot send the email to the business saying: "okay, now it is ready - go and check." I do it myself. I do not know if it is a good practice or not but I feel more confident. They are doing it for me, developers or the others are looking at the numbers, but I am also doing it because it is my reputation. Yes, it can go so bad for you as a manager to do this … oh, yeah check this when the environment is down actually."

> F1: "It is very easy to just to grab what they've been working on, deploy it somewhere and then just go through it at a high level."

The above empirical evidence demonstrates that managers can use many different ways to verify work progress of external consultants. One of the most effective and useful methods seems to be having regular verification cycles in forms of demonstrations and proofs of concepts. Verification cycles can follow a 5, 25, 50, 75, 100 % review model because, as interviewee C2 testifies, this practice works "extremely well" in their organization. This is in line with the previous research that stresses the importance of having a series of checkpoints that can facilitate verification of consultants' progress and presentation of some tangible evidence (Aje, 1988).

Another option, especially in the more technical area is that consultants' code (e.g. in software development) can be taken and quickly deployed in an appropriate environment, which can enable ICT project managers to see first-hand what has and has not been accomplished. When it comes to the technical consultants, code walkthroughs can also be used to verify progress and quality of the consultants' work. Moreover, code walkthroughs can also serve as a knowledge transfer and training mechanism, in which internal employees can get a better understanding of how the consultants' code works. Personal verification is also very important for an ICT project manager as it gives them a good sense of where the projects are. This practice goes together with frequent follow-up management practice, which is discussed in Section 5.2.1. In essence, managers in ICT projects need to visit consultants at their desks on a regular basis, and spend time and work closely with them. After all, as interviewee D1 puts it, personal verification ensures that project manager's reputation is not compromised.

5.4 Governance

As it was explained previously, consultants' self-interests and goals are usually different from those of their clients and effective management practices are needed to prevent consultants from getting off track and to align their interests with those of their clients. Management practices that are required to govern and administer external consultants' activities so that they have a clear understanding of what is being asked of them and work in such a way so that they can efficiently deliver the expected results are combined under the governance construct. Based on the findings from empirical evidence, governance has been extended with four sub-constructs: direct face to face management, expectations setting, deliverables management and procurement and selection process management, which is depicted in Figure 15.

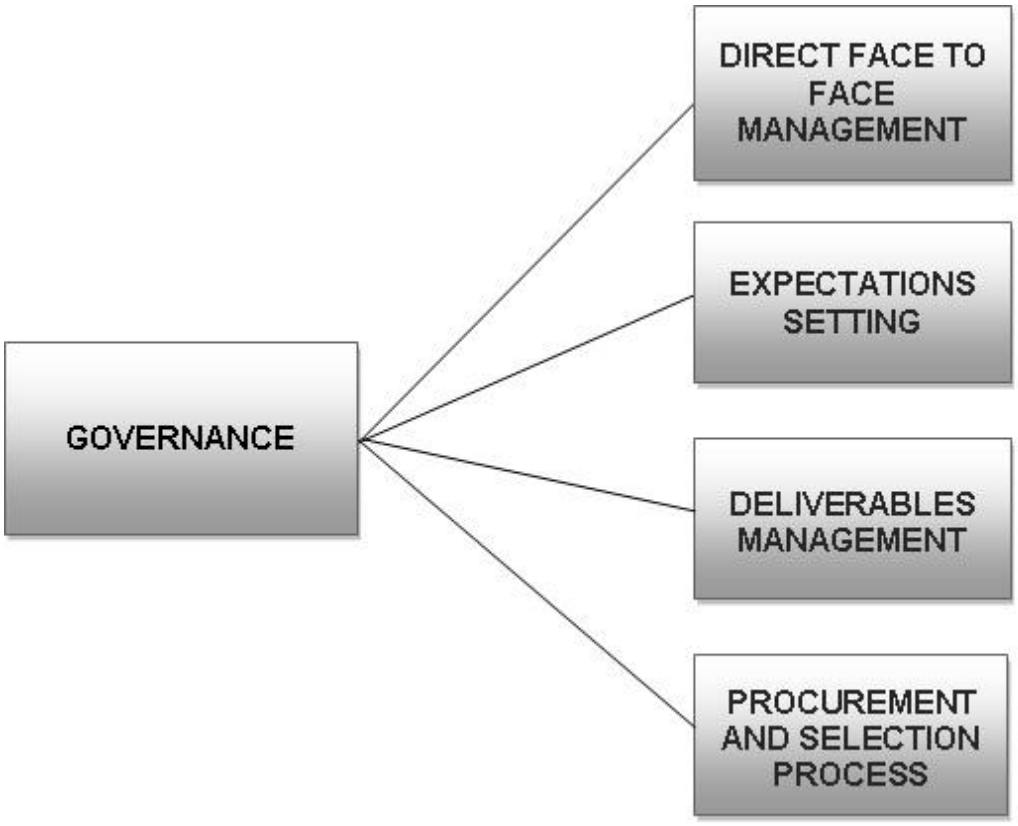

Figure 15: Governance Practices

Definition, empirical evidence, linkage to previous theory and explanation of direct face to face management, expectations setting, deliverables management and procurement and selection process practices, which can enable managers to cope with the challenges in management of external consultants in ICT projects are provided in Sections 5.4.1 through 5.4.4.

5.4.1 Direct Face to Face Management

Direct face to face management is a practice where managers are applying direct 'in person' interaction with the external consultants in ICT projects in order to collect and disseminate up-to-date information, check and verify project status and offer a vehicle for the consultants to express their needs and concerns. So, instead of relying on email, phones, messaging and other communication mechanisms where physical presence is not required, the direct face to face management entails going to consultants' desks or organizing one-on-one meetings with them. Direct face to face management can address communication, shirking and performance problems because managers can set and enforce expectations and ensure that the workload of consultants is at the appropriate levels. Moreover, through their physical presence, managers can portray the importance of the quality and quantity of consultants' work and they can apply some pressure to increase consultants' accountability. Direct face to face management practice improves project communication and hence falls under the project communications management domain (PMI, 2013).

Empirical evidence reveals that direct fact to face management is one of the most effective practices that can enable managers to effectively govern and direct external consultants' work in ICT projects. Interviewee C1 said that "nothing can replace" direct face to face management. Jackson (2010) believes that the only way to stay on top of a project is to interact with consultants. A very good summary of the effectiveness and timeliness of the direct face to face management is provided in the following interview excerpt:

> "E1: Simply, by very direct communication, I am asking for the confirmation of the status. So if I get a sense that something is not right, I am stating that things are not right, I am stating that they are either late or that the quality is not acceptable or that the scope of the supply is not honored. I am asking direct confirmation and understanding of that. And after that usually things are straightened out in a meaning that you know exactly where we are. If things are bad, how bad they are, if things need to be fixed how they are going to be fixed."

As it can be seen from the above, direct face to face interaction enables managers to validate the status and to actually sense and detect if something is wrong. What is more, direct fact to face interaction provides an opportunity for managers to raise their concerns right away and thus prevent issues from developing into much bigger problems. This is very important, because issues in ICT projects can quickly get out of control if they are not identified and addressed early on. Empirical evidence supports this point:

> B1: "But, really if you do face to face, you know, in person to see the progress and you will discuss and discover [it] early. It won't end like a disaster happened."

> D1: "Face to face works the best … face to face. Meetings, one to one meetings, yeah that is a good one. I noticed it works the best when you seat with a consultant and see what are the problems that you encounter."

Unfortunately, there are many cases where the lack of timely information can create serious troubles for ICT projects (e.g. Goldfinch, 2007; Keil et al., 2004). Furthermore, managers can also put more immediate pressure on consultants by pointing out that they are aware of the seriousness of the situation and they can ask for explanations, plan of action and consultants' commitment to resolve the issues in a timely manner.

However, it has to be noted that direct face to face management requires daily communication with external consultants, because, as Aje (1988) puts it, regular communication with consultants is critical for success of the projects. This should be taken into consideration when planning management activities because sufficient time needs to be allocated for direct face to face interactions with external consultants. This

may not always be possible, but the importance of this should be stressed because it will certainly pay off in the long run. For example, interview C1 describes that:

> C1: "On top of [that] I usually work with my consultants currently also on a daily basis. I have interactions with them … face to face interaction on a daily basis so I am fully aware of where they are even without the project manager or without a project plan."

In summary, direct face to face management is truly an effective practice that can enable managers to be fully informed and to acquire a good sense of where the projects are, what the issues are, and what needs to be done to remove the obstacles and correct the problems in order to deliver quality solutions on time.

5.4.2 Expectations Setting

Expectation setting is a management practice that can be utilized by managers in ICT projects to ensure that external consultants have a very clear understanding of what is expected of them. Expectation setting is a very important part of an effective communication process, which requires repetitive and persistent clarification and confirmation of what is expected from the consultants. However, before engaging consultants, it is critical to produce a clear identification and definition of the problem first (Aje, 1988). Even though expectation setting can be a very useful and effective practice for management of external consultants, it appears the consultants do not really know what their clients expect (Violino, 2005). Expectation setting management practice can also help with the improvement of project communication and consequently also falls under the project communications management domain (PMI, 2013).

Empirical evidence from this research shows that it is important to start with the expectation settings as soon as consultants come on board in order to get them accustomed to the process and set their behavior in the right direction:

> B1: "That is the direct communication on the first day and when you assign the work or anything you have to let them know what the expectation is. You expect them to bring you back good or bad news.

> Clarifying your expectation or their roles and responsibilities is really important."
>
> C2: "So, first of all it really starts, at least personally what I do in terms of when we have a consultant engagements onboard, it is about setting expectations up front that issues and risks and calling out for help is not a bad thing."

Furthermore, interviewee C2 points out that "it is really about doing it right up front and setting those expectations and making it very clear what are deliverables that you measure against". Not only does this increase consultants' accountability, but it also gives them a clear evaluation system of what they will be assessed against. This way, consultants can organize and approach their work so that their focus is on the right tasks and that the quality of their work is in accordance with the expectations.

Setting clear expectations is very critical because misunderstandings (Lev, 2005; Goldfinch, 2007) are quite common in ICT projects. For that reason, managers need to ensure that consultants have absolutely the same understanding of the work that needs to be completed and a common practice is that managers ask consultants to repeat back and describe in their own terms of what the expectations are:

> B2: "If you're giving someone instructions you have to be sure that they've understood what's required of them and what they've been asked to do. And the way to do that is you have a discussion, you ask them to explain back to you what the requirements are and what's been asked of them and then it is also written down, documented so we've all got that to refer to."
>
> C2: "And typically what I've seen on that front is that it really comes down to, again both in terms of how we, or how I engage a consultant and how the consultant reiterates that back to either myself or to the employer or whoever to reconfirm the expectations"

Evidently, it is really important to confirm that a consultant has a correct understanding of the expectations and as interviewee C2 puts it, consultants need to reiterate and reconfirm the expectations. However, the problem is that even if consultants initially understand the expectation, they may later start deviating from those expectations. Therefore, expectation setting has to be an iterative process where

managers need to constantly reinforce expectations and emphasize what is really required and expected from the consultants.

Another important purpose of expectation setting is getting the message across to external consultants that "calling out issues and risks is not a bad thing", as interviewee C2 puts it. This is in line with Keil et al. (2004) who hold that organizational climate affects one's perceptions of whether bad news ought to be reported and it is one's personal responsibility to report the bad news. This implies that in the companies where people are encouraged and rewarded for raising alarms and expectations are such that it is each individual's responsibility to provide accurate status, including bad news, consultants are also more likely to report the bad news. This is related to the practice of creation of the proper atmosphere, which is discussed in Section 5.5.1.

5.4.3 Deliverables Management

Deliverables management is a management practice in which clear deliverables measurement criteria are set ahead of start of projects and internal employees act as proxies on behalf of external consultants by taking responsibility for the delivery of the tasks that are assigned to the consultants. Deliverables management is organized around deliverable acceptance criteria and deliverable acceptance owners. The following extracts from the empirical evidence describes this practice:

> C2: "So, one of the changes that our organization has implemented recently is really around what we call these deliverable acceptance criteria. That every time that we have a full-time or a consultant engaged on a project, everything is deliverable-based and those deliverables have clear acceptance criteria as well as clear acceptance owner in place so that consultant working on delivering that deliverable clearly understand how they're going to be measured for success."

> C2: "So, that acceptance criteria is developed by what we call an acceptance owner or the owner of the deliverable, and that owner of deliverable has accountability from our organization to reach out to the people actually doing the work making sure and reviewing upfront what those criteria are prior to actually starting the deliverable."

Having everything deliverable-based raises external consultants' accountability and ensures that they become conscious that all their work will be checked for completeness and quality. At the same time, having predefined deliverables acceptance criteria makes it clear for external consultants on what they will be measured against for success and what they need to do to satisfy their clients expectations. Clear definition of the scope and goals of a project is critical for the successful engagement of consultants (Jackson, 2010; Mitchell, 1994; Kubr, 1993; Aje, 1988). This is really important because, previous research suggests that one of the most common problems that consultants encounter is not having clear goals and objectives set by their clients (e.g. Mohe, 2005), and consequently not knowing if they are satisfying clients' goals (Violino, 2005). The above described deliverables management practice provides transparency, which can motivate consultants to organize their work and time effectively. Moreover, such deliverables management practice also raises accountability of the internal employees who act as deliverables acceptance owners. Their previous knowledge of the organizational procedures, polices, processes, internal politics and people can streamline delivery of the project tasks. Not only are they responsible for the delivery of the project tasks and their quality, but they can also better organize and plan all activities that support production of these deliverables. This management practice can serve well as a coordinating governance mechanism. Research participant C2 confirms that the above described deliverables management practice "works very well" for their organization.

Another important implication of the deliverable-based work organization is having detailed work breakdown, which can enable managers in ICT projects to acquire a good understanding of the required work and to easily track the progress. The following examples from the empirical evidence provide support for this claim:

> B1: "See, that is the best way, like the best practice, you have to ... say when you work with the consultant you have to have a clear work breakdown, and not only provide high level. It has to be functional based. So, the unit based - what you can see as a unit work deliverables so you don't get the big piece."

> E1: "That is why we have scope of supply or scope of work. That is a document that needs to be … It means basically clarifying the deliverables in a sense of quality and status for the consultants."

Evidently, having only a high-level work breakdown does not give managers in ICT projects much visibility into what consultants may be doing and it does not allow for easy and accurate work progress verification. In addition, not having everything documented in detail can create misunderstandings in what actually needs to be done (Nelson, 2007; Lev, 2005; Violino, 2005). If there is no clear and detailed work breakdown, certain work can be missed and this can create problems and delays down the pipe:

> B1: "That is back to your original question again and it's like being specific deliverable unit. Definition of that is really critical. Otherwise, it can cause the chain problems."

Creation of the work breakdown structures for external consultants' work falls under the project scope management domain (PMI, 2013). Detailed work breakdown structures can help managers in ICT projects to have a clear understanding of the work that is required and thus enable them to control the project scope.

5.4.4 Procurement and Selection Process

External consultant procurement and selection process starts with a well prepared and conducted interview process. The interview process provides managers with an immediate opportunity to identify the right external consultants who posses the required expertise and who will make a good fit within the environment. The importance of conducting a thorough interview process cannot be overstressed:

> D1: "I think it should start with the interview. You know when you recruit the consultant you have to know what questions to ask that consultant. And that is the hot point. If you do not interview properly you end up with a person that is not fitted properly with your place."

> C1: "A thorough interview, really prepared questions. So I usually prepare myself for the interview, help prepare question, expected answers. And then it comes with experience. With experience you become able to read people, and to get to know them really quickly. Within fifteen, twenty minutes you can figure out who are the persons you can click with and really work well with or not. So, not only on a technical level, but also on the attitude and personal level."

It appears that good interviewing skills and judgment and evaluation of potential consultants comes with experience. That is why the external consultant interview panels should always contain team members who have significant experience in recruitment of external consultants for ICT projects. However, sometimes even if the potential external consultant candidates appear to be the perfect choices for the engagement, later experience may prove just the opposite. In these cases new consultants need to be recruited, selected and procured and this, of course, creates additional delays and costs (Williamson, 1975, 1985). In order to alleviate these problems organizations can consider forming alliances with consulting companies who can provide consistent quality of services or they can re-hire consultants whom they engaged before and with whose work they have been satisfied:

> E1: "Very often those are our strategic consultants. So in a meaning that - let me put it this way - we are, as a company, you know company is not interested in providing a certain portion of the package. We are not interested to be involved in a certain portion of the scope of supply and we do know that in most of those cases that we do have the need for that and we are forming like a strategic consultancy [alliance] with the companies that are providing those niche type of the services. "

> E1: "At the same time I'm providing him with the consultants that we have a history of dealing with, providing with credential of the consultants for the projects that we used them and for their other projects…I mean, probably the references. Their [consultants'] references from the previous jobs."

Of course, it may not always be possible to form strategic alliances with consulting companies or to recruit the best consultants that were previously employed in ICT projects. In any case, organizations should certainly keep track of their consulting providers, perform a post-procurement evaluation (Mitchell, 1994) of their consultants,

and maintain a list of the consultants who have done excellent jobs because this has many advantages (Kubr, 1993).

Some of the challenges that occur during the consultant procurement and selection process are related to the problem of adverse selection, in which consultants may misrepresent their skills and clients may not be able to verify consultants' claims before making a decision to hire them (Eisenhardt, 1989a). Adverse selection problems are discussed in more detail in Section 4.4. Methods for solving the adverse selection problems during the procurement and selection process may include: competitive bidding, and reputation verification (Bajari and Tadelis, 2001). Competitive bidding is in accordance with Mitchell (1994) who warned against working with only a single supplier out of convenience. Next, reputation verification is really important in order to minimize the risk of selecting the wrong consultants (e.g. Maister, 1993). External consultants' reputations can be verified through their previous employers or by hiring consultants who have worked on previous projects for a company. Insuring a buyer against the default by the contractor has to be addressed in the contract management. Contract management is discussed in more details in Section 5.5.

Besides the above described management practices that can be applied in external consultants' selection and procurement process, Leipold et al. (2004) also offer several useful approaches for selecting consultants:

- **Quality and cost based selection** (project scope, required resources and costs can be accurately estimated)
- **Quality-based selection** (appropriate for complex and highly specialized tasks)
- **Selection under a fixed budget** (appropriate only for simple assignments)
- **Least cost selection** (appropriate only for standard and routine tasks)
- **Selection based on consultants' qualification** (appropriate for small projects where the effort to go through the full bidding process is not justified)
- **Single source selection** (this method should only be used in exceptional situations)

The above guidelines are helpful for determining the best selection approach based on a specific situation and requirements of each individual ICT project. Acquiring external consultants to work as a part of the project teams falls under the project human resources management domain (PMI, 2013).

5.5 Incentives and Contract Management

A contract defines an agreement about the details and scope of work and forms a relationship between an agent and a principal (Eisenhardt, 1989a). A contract must contain details about the monetary incentives, but it may or may not contain details about non-monetary incentives. Creating, administering and closing external consultants' contracts are part of the project procurement management domain (PMI, 2013).

Financial rewards are clearly important in attracting the best potential consultants to enter into a working relationship, but the right non-monetary incentives can also motivate competent consultants to stay for the whole duration of ICT projects. Situations with the turnover of the key consultants should be avoided because there are associated costs to recruit and procure appropriate consultants and additional costs to set up suitable contracts (Williamson, 1975, 1985). Hence, in order to get the most value from an agent's work and retain the most productive external consultants, organizations must provide the right monetary and non-monetary incentives for the consultants to increase their motivation and effort (Eisenhardt, 1989a). Based on the findings from empirical evidence, incentives and contract management has been extended with three sub-constructs; creating proper atmosphere, payment control and limiting length of contract as illustrated in the following Figure 16.

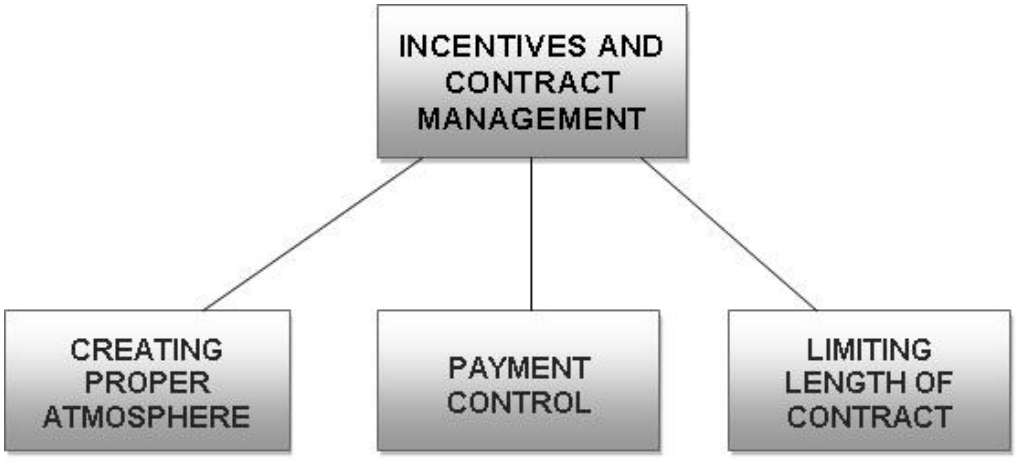

Figure 16: Incentives and Contract Management Practices

Definition, empirical evidence, linkage to previous theory and explanation of creating proper atmosphere, payment control and limiting length of contract practices, which can enable managers to cope with the challenges in management of external consultants in ICT projects are provided in Sections 5.5.1 through 5.5.3.

5.5.1 Creating Proper Atmosphere

Creating proper atmosphere in a working environment is a vital non-monetary incentive, which can provide transparency and make external consultants feel valuable in ICT projects. Furthermore, creating proper working atmosphere is necessary for establishment of trust and good working relationships (discussed in Section 5.6.1) and for communication improvements when it comes to reluctance to share bad and negative news (discussed in Section 4.3.1). Creating proper atmosphere management practice can help with the improvement of project communication and thus falls under the project communications management domain (PMI, 2013). Below are examples extracted from the empirical evidence that support the above premise:

> B1: "And one way is - you have to be, you let them feel the trust you are okay to hear negative news. You're not type of person whenever you see negative news and they feel they're going to be punished or they're going to be terminated right away. You have to let them feel you're actually

> willing to hear those bad news because things [are] happening, especially in the technology world, right? And you're willing to work with them to resolve the issues and not finger-point or blame."

> E1: "Well, we are going back to the beginning where you have to establish the trust with the consultant, where they feel comfortable to report the bad news."

This is in accordance with Keil et al. (2004) who explain that organizational climate is very important for making external consultants report bad and negative news. In other words, in order to encourage external consultants to share information and report the bad news in ICT projects, right incentives need to be put into place. For instance, Lambright (2009) explains that both extrinsic and intrinsic factors have an effect on contracted workers' accountability and willingness to provide accurate status updates and share bad news. The right atmosphere needs to be established so that consultants feel free to report bad news. Consultants should feel free to raise issues even if they do not represent any danger because as participant C1 puts it "it is better to raise false alarm than to let the house burn in fire." Other empirical evidence examples include:

> C1: "Well, so I try to make the atmosphere such that reporting bad news, reporting slippages in the project is not a catastrophe. It is ... it is one way to discover where we are, what the real status is, so that we can fix it and put some indication in place."

> C2: "It is absolutely about the culture of the organization in order to remove the fear away from reporting [the bad and negative news]."

As empirical evidence suggests the fear of being held responsible or punished in some way for delivering bad news has to be removed from external consultants. However, this may not always be easy as some managers may not want to hear bad news (e.g. Goldfinch, 2007). However, it has to be noted that consultants are not always responsible for project issues that arise. Even in cases when they are indeed responsible for them, it is better to find out about it early and act accordingly instead of letting the whole situation become even worse. For example, expensive modifications

and additional work could be often avoided if external consultants share the bad news in a timely manner. That is why willingness to accept and reward reporting of bad news should be promoted from the top management as part of the organizational culture.

5.5.2 Payment Control

Payment control refers to the mechanisms that regulate how and when external consultants are paid for their work in ICT projects. For example, Baker and Faulkner (1991) highlight that payment should be linked to performance. Following this, organizations should create such contracts that tie their external consultants' pay to some measurable metrics that can be used to assess their deliverables. This goes in line with deliverable management practice, which was discussed in Section 5.4.2. Even though previous research and empirical evidence suggest that organizations should utilize outcome-based contracts to make consultants more accountable and productive, it appears that some organizations are still not doing this:

> B1: "I've been thinking to design a form, say for this month here is the list - if you complete this, here is the money. And if you do not complete … it does not necessarily mean we are not going to pay. But we'll only pay when you deliver that. It is kind of payment deferral."

> C1: "You can also, yes, you can put it as a payable deliverable that is the best case, in which case if they do not deliver you do not pay them."

> B1: "But I think that like budget control or the payment control is one of things we could implement or consider to manage consultants."

Empirical evidence points to another important issue when it comes to contract management and that is determining what type of contracts should organizations use when engaging external consultants in ICT projects: fixed-price contract, where the price for completing certain work is predetermined regardless of how much time it takes to complete or time-and-material contract where consultants charge according to how much time and material they spend for completing the assigned work. On a fixed-price

contract consultants will usually only want to complete the tasks that are specified in a contract, while time-and-material contract type can be a little bit more flexible:

> C2: "And obviously when you are on a fixed-price engagement there is some sort of company or consultant there to make profit. So, they've obviously built in so much profit to that contract that they want to make sure that they still make their margins and will stick to the tasks, will stick to the deliverables of the fixed-price contracts. Versus somebody who's on the time and material side, it is obviously a little bit easier you ask them to do something different and they're going to say you know what, no problem."

Making a choice of what type of contract is more appropriate depends on a particular situation, but regardless of the contract type organizations should tie external consultants' payment to their deliverables whenever possible to increase their accountability and productivity. Thus, Gomez-Mejia and Balkin (1992) suggest that the outcome-based contracts should be used to reduce the agency problems in the context of professional groups (e.g. highly specialized ICT consultants). Furthermore, in order to reduce dependency on high-incentive contracts and reduce the associated costs, the classical agency theory states that lower uncertainty through better forecast and more accurate information can reduce the need for the high-incentive outcome based contracts (Eisenhardt, 1989a). This is related to the previous Section 5.5.1 that is discussing the practice of creating proper atmosphere to share all the news, including negative news.

5.5.3 Limiting Length of Contract

It is really important for the organizations to determine the optimal duration of the contracts to keep their external consultants productive for the whole duration of their assignments in ICT projects. Empirical evidence suggests that the time that consultants spend working for organizations negatively affects their performance:

> B1: "I'll give you example: your consultant could deliver at the beginning similar functionality in 3 weeks. 3 years later, probably for similar

> functionality it will take them 3 months …you can see performance being downgraded. Because once people get familiar with your internal capabilities, they think as long as they do a little bit better than the internal resources they can continue."
>
> E1: "I have a feeling that besides the initial learning curve, you know there is a level of comfort that consultants feel. And with the challenges of the tasks that are coming for them, you know, that they are getting into the comfort zone. Basically, their efficiency is shortening."
>
> F1: "You know, I would probably say that if they are working on a brand new project that the performance probably goes up and I think it is probably not until the end of the project where their interest and probably some of their performance starts to go down. So, if you can sort of picture up and down, up and down, but I would say that still over time that [it] fully goes down. "

Evidence suggests that performance of external consultants goes down over time. Possible reasons could be that, as time passes by, consultants adjust to the organizational culture and become more like the full-time employees who may be less productive to begin with. However, external consultants are well paid professionals who are hired because of their specialized skills, experience and know-how (Wong et al., 2005) and they are expected to provide high performance and deliver on a continuous basis. External consultants may be very productive at first because they want to prove themselves and show that they are capable and worth the money, but this high level of performance may not last for a long time. That is why it may be more efficient to have more frequent contract renewals of consultants' engagements "to keep them fresh," as participant C2 puts it, rather than to have longer contracts to begin with. This is in line with previous research by Lacity and Willcocks (1998) who hold that short-term contracts can provide more benefits for the clients than the long-term contracts because short-term contracts involve less uncertainty (e.g. changes in a project are likely to happen), they stimulate consultants' performance (e.g. they know that they can be replaced at the end of a contract), they allow clients to recover from mistakes quicker (e.g. wrong consultants or contracts were utilized), they are ensuring that clients are charged a fair market price (e.g. consulting services prices change over the long run).

Hence, it may be better to have multiple shorter consulting contracts, which are renewed at three or six months cycles than to have a longer contract that spans over a year or longer period.

> F1: "I think the longer they stay probably the more comfortable they get. I would say that people that are about in for relatively short contracts are usually the ones that are more keen to come in, to get the things done, make an impact and then be happy to move on."

Moreover, external consultants' opportunistic behavior may depend on the frequency of contracts. If they know that there is a chance of contract reoccurrence, they will normally minimize their opportunistic behavior in order to build good reputation and earn future contracts. So, multiple renewals of shorter contracts instead of one long-term contract may help keep external consultants productive and efficient in ICT projects.

5.6 Building Relationships and Trust

In order to have good cooperation and increase productivity and satisfaction among external consultants in ICT projects, managers need to promote development and fostering of good working relationships and trust with consultants. Previous research findings (e.g. Liberatore and Luo, 2010; Patanakul, 2010; Chen et al., 2009; Mohe, 2005; Kadefors, 2004; Maister, 1998; Mitchell, 1994; Kubr, 1993) indicate that building trust and good relationships between clients and consultants should be given high attention as they have a significant positive influence on the project performance. Clearly, facilitation of good relationship and partnership with the consultants is very important for the success of ICT projects. Building relationships and trust with consultants facilitates improvement in project communication and thus can be categorized under the project communications management domain (PMI, 2013). Empirical evidence from this research offers some guidance on building good relationships and trust with external consultants:

> B1: "Informal is all about social networking, right? So, you let people know more about you, your management and leadership style, what do you expect from them and what do you present, like lead by examples. So you want to show them, say you can be trusted, right? It doesn't matter if it's at personal level or at work level. You know this type of conversations; you know you do not just treat them as consultants so that you only talk about work.
>
> E1: "Yeah trust. Kind of trying to emphasize all in the daily communication - the importance of the work that they are doing and appreciation of the work that they are doing. So, you kind of have to give them good comments all the time. That is one of the ways."

The above empirical evidence suggests the in order to build good working relationships and trust, managers in ICT projects need to provide regular feedback and let consultants know that they appreciate their work and delivering of high-quality solutions. For example, managers could have regular performance reviews and provide constructive feedback for their consultants. Furthermore, managers should let consultants know more about their management style and about themselves in general, even at the personal level. This means opening up and getting to know them better in order to know what their values, norms and expectations are. Managers' personalities also seem to play an important role in establishing good relationships and trust with their consultants.

> B2: "But it's if you are a decent person and you treat people decently, it's not something that you train it's something that you do."
>
> F1: "I would think that you need to have a fairly good personality."

The problem, however, is that previous research indicates that many clients are hesitant to open up and build closer personal relationships with the external consultants (Kadefors, 2004). This may be one of the obstacles in improving external consultants' performance and satisfaction in ICT projects. For example, Chen et al. (2009, p. 165) write that: "ERP implementation projects heavily depend on the 'arduousness of the consultant-client relationship' and the degree of 'shared understanding' - the similarity in

work values, norms, and problem-solving approaches between consultant and client team members". What is more, establishment of trust and good relationships also makes consultants' lives easier as they can freely ask managers for help when they need it:

> D1: "Yeah, so you have to talk to them and say 'you know what, this is how we are doing this, if we have a project to do deliver. I know we have a lot of other stuff to do, but this is what we have to do and if you need help you come to me and we are going to find the workaround.' … So they have to trust you and when they have problems or questions they're not in a very good situation, they come to us managers and they ask for help. And it happens it really happens in our environment."

If managers of ICT projects can trust their external consultants, they can lower the risk of project failures because they can be more assured that consultants will do whatever they can to resolve the issues and move forward or to report bad news, when bigger problems arise. Knowing that managers can rely on their consultants can make a big difference:

> A1: "Well, you know I think it is a trust, it is a trust issue. So we do, after a while you learn who you can trust if they are telling you that they've done something that they've really done it."

Evidently, more emphasis should be given to building good working relationships and higher levels of trust between organizations and consultants. This can be achieved through team building, effective communication in early stages and consideration of behavioral aspects such as shown respect and concern between the two parties (Kadefors, 2004). In addition to this, common goals should be defined between consultants and their clients to join forces and to know that they are ultimately working toward the same goal. Building good relationships should be a natural process because, after all, external consultants and their clients must co-operate if they want to succeed or as Mitchell (1994) puts it consultant-client relationship is largely influenced by their interdependency.

CHAPTER 6: DISCUSSION AND CONCLUSION

6.1 Introduction

While there are many reasons for ICT project failures such as large scope and complexity (e.g. Patanakul, 2010), unclear project requirements (e.g. Nelson, 2007), and unrealistic expectations (Goldfinch, 2007), empirical evidence from this exploratory research suggests that challenges in management of external consultants can also create roadblocks in ICT projects. Considering that the proportion of external consultants in ICT projects is actually quite high (e.g. Violino, 2005; Kumar et al., 2003) it is critical to employ effective management practices that can enable practitioners to eliminate or lessen the impact of these challenges. Rottman and Lacity (2008) and Goldfinch (2007) warn against over-relying on external consultants and believe that organizations should first look for internal resources whenever possible. Along the same lines, Nevo et al. (2007) suggest that organizations should assess their internal IT capabilities first, and should not use external consultants if their internal IT capabilities are strong or even moderate. Furthermore, previous research indicates that using internal resources can be less expensive than using external consultants (e.g. Appelbaum and Steed, 2005; Kelly, 1979). However, empirical evidence suggests that organizations generally give external consultants priority over internal staff even if they have the same skills and qualifications. For instance, participant C2 notes that external consultant's opinion is typically valued more than that of an internal employee even if they say the exact same thing.

In cases when required resources do not exist internally and organizations have no choice but to engage consultants, effective management of these external resources is crucial in order to get the most value from their services and increase ROI. However, significant effort and skills are required from the managers of ICT projects to align consultants' interests with those of their clients. It appears that not only are organizations usually ineffective in utilization of their consultants, but they are also often lacking required skills to properly manage them (e.g. Mohe, 2005). For example, managers in ICT projects should exercise stricter project risk management (e.g. Nelson,

2007; Wong et al., 2005) in their dealings with external consultants and prepare adequate strategies and contingency plans for coping with the potential challenges in management of consultants. Obviously, additional consultant risk management activities bear extra cost. Nevertheless, additional risk management activities will decrease the likelihood of project failures, and the incurred costs are usually paid off rather quickly (Masticola, 2007).

6.2 Discussion of Findings

This section presents and describes and integrated theoretical model of all identified challenges and enabling practices in management of external consultants in ICT projects. The model is grounded in the empirical data and it was spawned after many iterations of the data analysis process. The final model that was generated in this research synthesizes all identified challenges and practices to form a unified and integrated theoretical model of challenges and enabling practices in management of external consultants in ICT projects. During an iterative data analysis process (Creswell, 1998; Miles and Huberman, 1994; Strauss and Corbin, 1990; Eisenhardt, 1989b) the theoretical model was continuously refined based on new empirical evidence until such time when no new major concepts and relationships were emerging, at which point a theoretical saturation was reached. In order to facilitate generation of the theoretical model, coding and thematic analysis methodology was used to perform exploratory qualitative analysis of the collected empirical data. The detailed explanation of the coding and thematic analysis approach is outlined in Section 3.5.

This model provides a more holistic view of all identified challenges and practices in management of consultants as well as their grouping and relationships, and a more detailed indication of how particular enabling practices can address some specific challenges in management of consultants in ICT projects. The research model is presented in the following Figure 17.

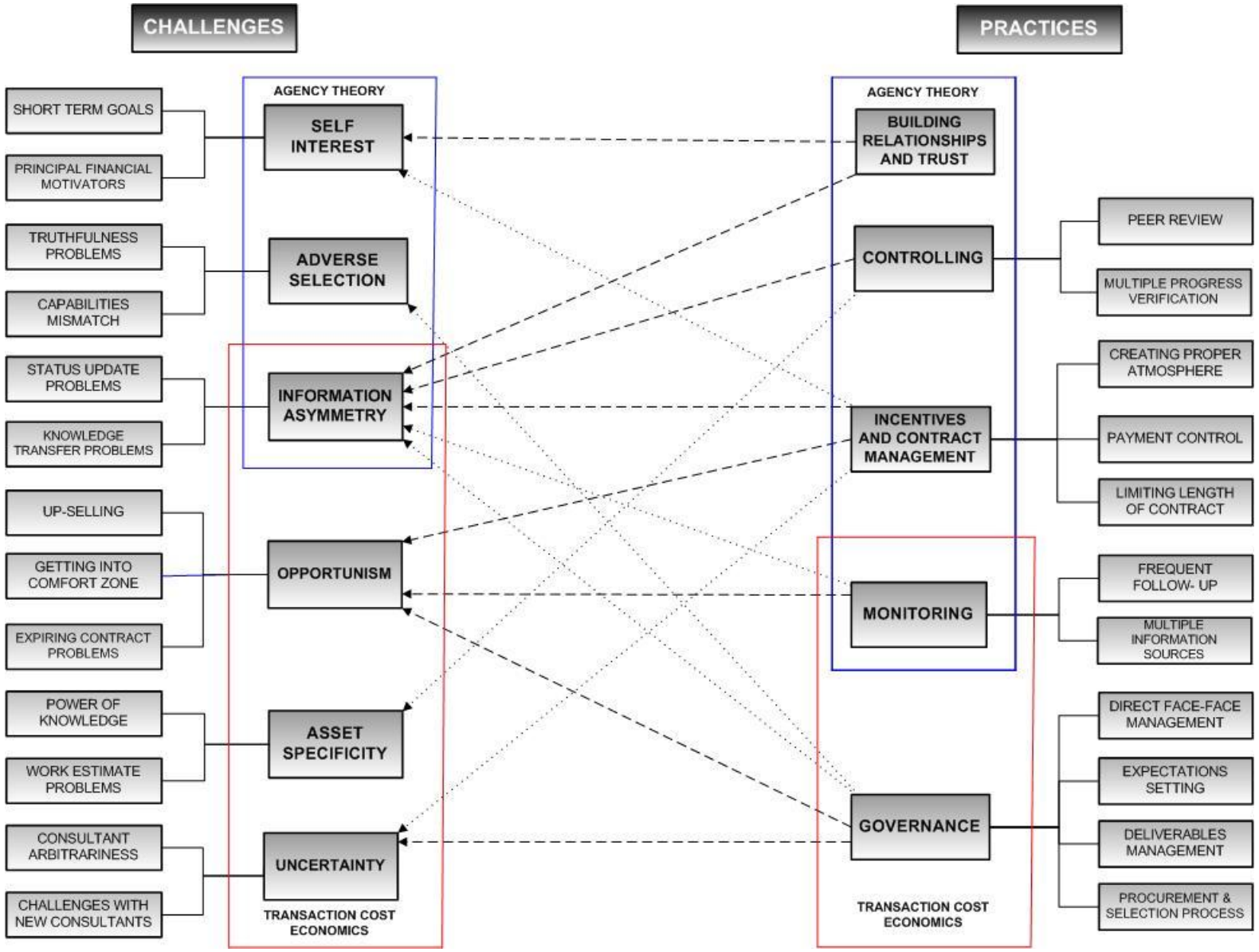

Figure 17[1]: Model of Challenges and Practices in Management of Consultants

[1] Legend: Dashed arrow (——►) implies strong evidence. Dotted arrow (- - - ►) implies moderate evidence.

The above depicted model of challenges and enabling practices in management of external consultants in ICT projects shows challenges presented on the left-hand side and enabling practices listed on the right-hand side. The challenges in management of consultants that were identified in this exploratory research are grouped together under the constructs adopted from agency theory and transaction cost economics. These construct include: self-interest, adverse selection and information asymmetry from agency theory, and opportunism, asset specificity, uncertainty and also information asymmetry from transaction cost economics. These main constructs are further extended into new sub-constructs that are drawn from the empirical data. Thus, self-interest is extended into short-term goals, and principal financial motivators. Adverse selection is extended into truthfulness problems, and capabilities mismatch. Information asymmetry is extended into status update, and knowledge transfer problems. Opportunism is extended into up-selling, getting into comfort zone, and expiring contract problems. Asset specificity is extended into power of knowledge, and work estimate problems. And lastly, uncertainty is extended into consultant arbitrariness, and challenges with new consultants.

Likewise, enabling practices in management of consultants that were identified in this exploratory research are grouped together under the constructs adopted from agency theory and transaction cost economics. These constructs are: building relationships and trust, controlling, incentives and contract management, and monitoring from agency theory and governance together with monitoring from transaction cost economics. All of these main constructs, except for building relationships and trust, are further extended into new sub-constructs, which are drawn from the empirical evidence. Thus, controlling is extended with peer review, and multiple progress verification. Incentives and contract management is extended with creating proper atmosphere, payment control, and limiting length of contract. Monitoring is extended with frequent follow-up, and usage of multiple information sources. And finally, governance is extended with direct face to face management, expectations setting, deliverables management, and procurement and selection process.

Next, based on the empirical evidence that is drawn from this research, the above model illustrates that particular enabling practices can address some specific

challenges in management of external consultants in ICT projects. The relationships are shown with either dashed arrows (——►), which imply that strong evidence was found, or dotted arrows (- - -►), which imply that moderate evidence was found in this research.

Hence, the research model suggests that building good working relationships and trust with consultants has a strong effect on the challenges related to the self-interest of consultants because this practice can help with defining common goals and joining consultants and clients' efforts to work toward the same end results. This process can facilitate in creating better alignment of interest between the two parties. Next, this enabling practice can also be used to improve communication between clients and consultants and reduce information asymmetry by stimulating consultants to share all available information, including bad and negative news, with their clients. Moreover, higher levels of trust and good working relationships result in bonding among individuals and consequently improved knowledge transfer process.

The next enabling practice that can improve effectiveness of management of consultants in ICT projects is controlling, and its peer review and multiple progress verification techniques. Indeed, peer review seems to be a very powerful mechanism that can produce more accurate status updates and improve communication in general by reducing misunderstandings through clarification of the responsibilities and work that needs to be performed. Peer review can also smooth the progress of the knowledge transfer by assigning internal employees to work more closely with consultants. For example, Chen et al. (2009) point out that internal employees' shadowing of external consultants can be an effective approach for the knowledge transfer. Multiple progress verification, which can utilize demos and proofs of concepts, can also help in the knowledge transfer process. For instance, code walkthroughs can actually serve as an effective knowledge transfer and training method. Controlling mechanisms can also be used to lower uncertainty. For instance, when consultants get off track and start moving in undesirable directions, project managers and other consultants' peers can be used as an effective controlling and coordination mechanism, which ensures that they stay on track and keep moving in desirable direction.

Adequate incentives and contract management practices must be in place to keep consultants' performance at high levels, and align their interests with those of their clients. Accordingly, agency theory (Eisenhardt, 1989a) specifies that in order to get the most value from agents' work and retain the most productive consultants, organizations must provide the right monetary and non-monetary incentives for the consultants to increase their motivation and efforts. Solely financial motivators may not be enough for the optimal performance of external consultants in ICT projects and other intrinsic motivators, such as making them feel valuable members of a team, may need to be in place to keep them happy and productive. One of the most important non-monetary incentives that organizations should supply is creating proper working atmosphere, which can decrease self-interest and opportunistic behavior of consultants. A positive and healthy working atmosphere is essential for the improvements of communication and status update problems because this kind of atmosphere can induce consultants into sharing all available information, including bad and negative news because the fear of being punished is reduced in this kind of working environment. Creating proper atmosphere can also improve knowledge transfer and is actually necessary for establishment of trust and good working relationships with consultants.

Contract management also includes the payment control mechanism, which can be used to address consultants' opportunism, reduce shirking and improve efficiency and performance. For instance, Baker and Faulkner (1991) suggest that payment should be linked to performance. Gomez-Mejia and Balkin (1992) also recommend that the outcome-based contracts should be used to reduce the agency problems in the context of highly specialized professional groups. As a final point, limiting the length of consultants' contracts can also reduce opportunism and shirking. In other words, to keep consultants "fresh" and performing consistently at high levels, they should be engaged in multiple shorter contracts rather than one longer contract. This is in line with previous research by Lacity and Willcocks (1998) who hold that short-term contracts can provide more benefits for the organizations than the long-term contracts.

Another enabling practice that can improve information asymmetry and status update problems is monitoring. Firms can invest in various monitoring systems to get a better view of what their consultants are doing. For example, usage of multiple

information sources, such as acquiring information from other managers and team members and utilization of all available software packages and tools can facilitate attainment of a better picture of the work progress and status updates. Furthermore, frequent follow-up with external consultants in ICT projects can also facilitate generation of a fuller view of work progress as well as more accurate status updates, and communication improvements in general. Frequent visits and discussions with consultants give managers an opportunity to communicate, clarify and reiterate priorities and tasks, and thus reduce misunderstandings. Effective monitoring mechanisms such as frequent follow-up can increase consultants' accountability (Liberatore and Luo, 2010; Jackson, 2010; Baker and Faulkner, 1991) and decrease their shirking (Mahaney and Lederer, 2010; Ngwenyama and Bryson, 1999; Eisenhardt, 1989a). This means that organizations need to invest in information and monitoring systems in order to eliminate or minimize opportunistic behavior of external consultants.

Finally, various governance practices can be used to effectively deal with challenges in management of consultants. Hence, direct face to face management seems to be an effective practice that can enable managers to quickly discover potential issues and obtain immediate results by raising their concerns right away and thus preventing issues from developing into larger problems. Through this method, shirking and performance problems can also be lessened because managers can set and enforce expectations, and ensure that the workload of consultants is always at the appropriate levels. Moreover, through their physical presence, managers can portray the importance of the quality and quantity of consultants' work, and they can apply pressure to increase consultants' accountability. Direct face to face management also improves communication and ensures more accurate project status updates.

The other practice that can improve communication and reduce misunderstandings is expectations setting. The goal of effective expectations setting is getting the clear message across to external consultants and also establishing a belief that raising red flags and reporting bad news is actually a good thing. Appropriate expectations setting can also address consultants' up-selling behavior. For example, Jackson (2010) notes that when consultants start proposing additional things that they can do for a client, the expectation should be set that they first need to complete the

work that they have already started. Deliverables management is another practice that can motivate consultants to organize their work and time more effectively because this practice offers very precise definition of the work scope and goals by clearly defining work deliverables and explaining what consultants will be measured against for success. Furthermore, by providing detailed work breakdown, deliverables management practice can improve communication, reduce misunderstandings, and allow for easier and more accurate work progress verification.

The last governance practice is proper procurement and selection process. Hiring managers should be very diligent in selection of external consultants during the interviewing and procurement process because this practice, if applied appropriately, can address adverse selection that can manifest itself as truthfulness problems and capabilities mismatch. For instance, Bajari and Tadelis (2001) point out that in order to cope with adverse selection problems, competitive bidding and reputation verification techniques can be used. Furthermore, adequate procurement and selection process can address uncertainty related to the challenges with new consultants by keeping track of and recruiting previously employed consultants who have a record of providing high quality services. That is why carrying out a post-procurement evaluation is really important (Mitchell, 1994). Kubr (1993) adds that maintaining a list of the consultants who have performed well is a really good practice because this can bring many advantages later on. At last, procurement and selection process can also assist in addressing consultant arbitrariness problems by selecting the right consultants who possess not only the required skills, but who are also professional, have similar work practices, and will fit well into the working environment.

It is important to say that the chief goal of this research was to identify and group all challenges and enabling practices in management of consultants that were indentified in this research, and that the main focus was not to provide conclusive explanation and confirmation of all relationships between specified enabling practices and challenges in management of consultants. In view of that, the proposed connections between enabling practices and challenges should only be treated as conjectures until future research provides additional backing and refinement of all relationships between each of the identified enabling practices and challenges in

management of consultants. Still, it has to be noted that considerable support for the conjectured relationships between identified enabling practices and challenges in management of consultants was found in this research, and that the proposed model is likely to generate even more insights with additional investigation. Furthermore, the positive feedback from the study participants suggests that the research model is both valid and useful. The research participants collectively agreed that the presented model can help explain challenges and enabling practices in management of external consultants better or easier. Therefore, possibly the greatest benefit of the developed model and research findings are their usefulness and applicability for the practicing managers. Accordingly, the presented model of challenges and enabling practices in management of external consultants can assist managers in getting the most value from their consulting resources and increasing ROI. The research participants' feedback is further discussed in Section 6.3.

6.2.1 Answers to Research Questions

This section contains answers and related discussion for each of the research questions that were presented in Section 1.2.2. The first research question was:

RQ1a: What are the major challenges in the management of external consultants in ICT projects?

The findings from this research study suggest that the following major challenges in management of external consultants in ICT projects can occur:

- Short-term goals
- Principal financial motivators
- Status update problems
- Knowledge transfer problems
- Truthfulness problems
- Capabilities mismatch
- Up-selling
- Getting into comfort zone

- Expiring contract problems
- Power of knowledge
- Work estimate problems
- Consultant arbitrariness
- Challenges with new consultants.

Not only were the above challenges, which have been individually explored by prior studies, confirmed in this research but they were also synthesized and grouped to form a holistic picture of all challenges in management of external consultants in ICT projects. For instance, challenges associated with the consultants' short-term goals and principal financial motivators are related to the nature of the agent roles that consultants play. For that reason, it is important to understand what their self-interests are so that managers can anticipate potential issues and prepare appropriate strategies to address them when they arise.

Status update and knowledge transfer problems are related to the project communications issues. Communication problems with external consultants are one of the most critical areas that affect everything else and more weight should be put on improving communication effectiveness. Truthfulness problems and capabilities mismatch are related to the lack of ethics and professionalism among some of the consultants. Although majority of consultants may be ethical and professional, not all are, and managers in ICT projects should take this into consideration when selecting and procuring external consultants.

Up-selling, getting into comfort zone, expiring contract problems, power of knowledge, and work estimate problems are related to external consultants' shirking and opportunistic behavior, where they may take advantage of the situations that are not well monitored and regulated. For instance, power of knowledge may create lots of reluctance to share information, and may induce consultants into inappropriate behavior. Consultant arbitrariness and challenges with new consultants are related to the unpredictability of their actions and capabilities that they bring to projects.

The participants' feedback (presented in Section 6.3) indicates that the above defined challenges are valid and in line with their work experiences. Detailed explanation, definition, empirical evidence, and linkage to previous theories for each of

the above challenges are provided in Chapter 4, data analysis – challenges in management of external consultants. The subsequent research question was:

> *RQ1b: How can agency theory and transaction cost economics guide our understanding of the major challenges in the management of external consultants in ICT projects?*

This research study utilized the following agency theory and transaction cost economics constructs to guide our understanding of the major challenges in the management of external consultants in ICT projects:

- Self-interest
- Information asymmetry
- Adverse selection
- Opportunism
- Asset specificity
- Uncertainty

Furthermore, this research study extended the above agency theory and transaction cost economics constructs with the new sub-constructs drawn from the empirical evidence. These new sub-constructs are grouped together under the above specified agency theory and transaction cost economics constructs as the following[2]:

- Self-interest is extended with short-term goals and principal financial motivators
- Information asymmetry is extended with status update problems and knowledge transfer problems
- Adverse selection is extended with truthfulness problems and capabilities mismatch
- Opportunism is extended with up-selling, getting into comfort zone and expiring contract problems
- Asset specificity is extended with power of knowledge and work estimate problems

[2] Please refer to Figure 17 in discussion of findings for the graphical presentation of agency theory and transaction cost economics constructs and extended sub-constructs related to challenges in management of consultants.

- Uncertainty is extended with consultant arbitrariness and challenges with new consultants

As demonstrated in this research, agency theory and transaction cost economics provide a fertile ground for investigation and explanation of challenges in management of external consultants in ICT projects. In addition, positive feedback from the study participants suggests that the presentation of agency theory and transaction economics constructs in the research model is both valid and useful.

It is important to note, however, that the above specified challenges can be attributed to unfavorable consultants' behavior and/or inadequate project management practices. Project managers need to pay more attention to monitoring, controlling, collaborating with, and governing external consultants in order to keep their performance and efficiency at high levels. If these levels are not satisfactory, it is important to take prompt actions to address the problems, as issues in ICT projects can have a chain reaction and quickly result in additional complications. In view of that, the next research question was:

RQ2a: What practices can enable managers to deal effectively with the challenges in the management of external consultants in ICT projects?

The findings of this research study indicate that the following practices can enable managers to deal effectively with the challenges in management of external consultants in ICT projects:

- Frequent follow-up
- Usage of multiple information sources
- Peer review
- Multiple progress verification
- Direct face to face management
- Expectations setting
- Deliverables management
- Procurement and selection process
- Creating proper atmosphere
- Payment control

- Limiting length of contract
- Building relationships and trust

This research provides a further extension of the existing theories that outline management practices, which can be used to deal with challenges that may be posed by consultants in ICT projects. Detailed explanation, definition, empirical evidence, and linkage to previous theories for each of the above constructs are provided in Chapter 5, data analysis – enabling practices in management of external consultants.

Frequent follow-up with consultants seem to have a significant positive influence on consultants' performance. It has to be noted that for doing this, managers' diligence is very important. Next, usage of multiple information sources can allow managers to assemble all available information about consultants' work and thus enable them to compare different information sources and look for the consistency of information. Different sources of information should be amalgamated into a common repository for easier information retrieval. Furthermore, the findings of this research indicate that peer review can be used as a very effective multipurpose practice, which can help managers with quality control, knowledge transfer, controlling and coordinating consultants' work, providing more accurate status updates, and improving communication in general.

In order to verify work progress of consultants, managers should use multiple progress verification techniques, including personal verification, verification from other team members, and having regularly scheduled demos of the progress made. Another important practice that can enable managers to quickly uncover issues and obtain immediate results is the direct face to face management where managers spend time with their consultants in direct, one-on-one interactions. Setting expectations of what is really required of consultants is also vital for the effective utilization of the consulting resources. For example, in order to be on the same page, consultants should always reiterate back to their managers what they think that they are expected to do.

Within the deliverables management practice, responsibility for delivering consultants' work, which satisfies the specified quality standards, has to stay with the project manager or other permanent employees of an organization. This can be achieved by assigning internal deliverables acceptance owners who are also in a better

position to organize and coordinate work with other internal members, and thus ensure ultimate success of the projects. When it comes to improving practices in procurement and selection process of external consultants for ICT projects, managers should consider adopting models from other more mature industries such as construction and engineering.

Creation of proper working atmosphere is another important management practice, which can provide transparency and intrinsic motivators such as making external consultants feel valuable in ICT projects. In addition, creating proper atmosphere can facilitate improvements in communication such as sharing more accurate and complete information, including the bad or and negative news. Furthermore, creating proper atmosphere promotes development of good working relationships and trust between consultants and their clients. Another practice that managers can use to improve consultants' accountability and performance is tying their pay to deliverables.

Empirical evidence from this research also suggests that consultants' performance drops after a while and that they seem to be more productive in shorter contracts. Therefore, the length of consultants' contracts should be limited, and clients should rather engage into multiple renewals of the short-term contracts with their consultant rather than offering him/her a long-term contract in order to keep the productivity at high level. Finally, building good working relationships and trust with external consultants is a very valuable management practice that can help improve communication and consultants' performance. The feedback from the study participants, which is presented in Section 6.3), provides further evidence of the usefulness and practical value of systematic presentation of all identified enabling practices in management of external consultants, which is presented in the final research model. The last research question was:

> *RQ2b: How can agency theory and transaction cost economics guide our understanding of enabling practices that can be used to deal effectively with the challenges in the management of external consultants in ICT projects?*

This research study utilized the following agency theory and transaction cost economics constructs to help with understanding of the enabling practices that can be used to effectively deal with the challenges in the management of external consultants in ICT projects:

- Monitoring
- Controlling
- Governance
- Incentives and contract management
- Trust

Furthermore, this study extended the above agency theory and transaction cost economics constructs and generated new sub-constructs grounded in the empirical data that was collected in this research. These sub-constructs are grouped together under the above specified agency theory and transaction cost economics constructs as the following[3]:

- Monitoring is extended with frequent follow-up and usage of multiple information sources
- Controlling is extended with peer review and multiple progress verification
- Governance is extended with direct face to face management, expectations setting, deliverables management, and procurement and selection process
- Incentives and contract management is extended with creating proper atmosphere, payment control, and limiting length of contract
- Trust is extended with building relationships and trust

One of the most important recommendations related to management practices is that managers in ICT projects need to be proactive in addressing possible challenges with external consultants, and they need to actively manage them from the very first day when they join an organization. Even though proactive consultant management may increase the project costs in the beginning, it will certainly decrease the overall project costs in the long run. The following Figure 18 illustrates this point.

[3] Please refer to Figure 17 in discussion of findings for the graphical presentation of agency theory and transaction cost economics constructs and extended sub-constructs related to enabling practices in management of consultants.

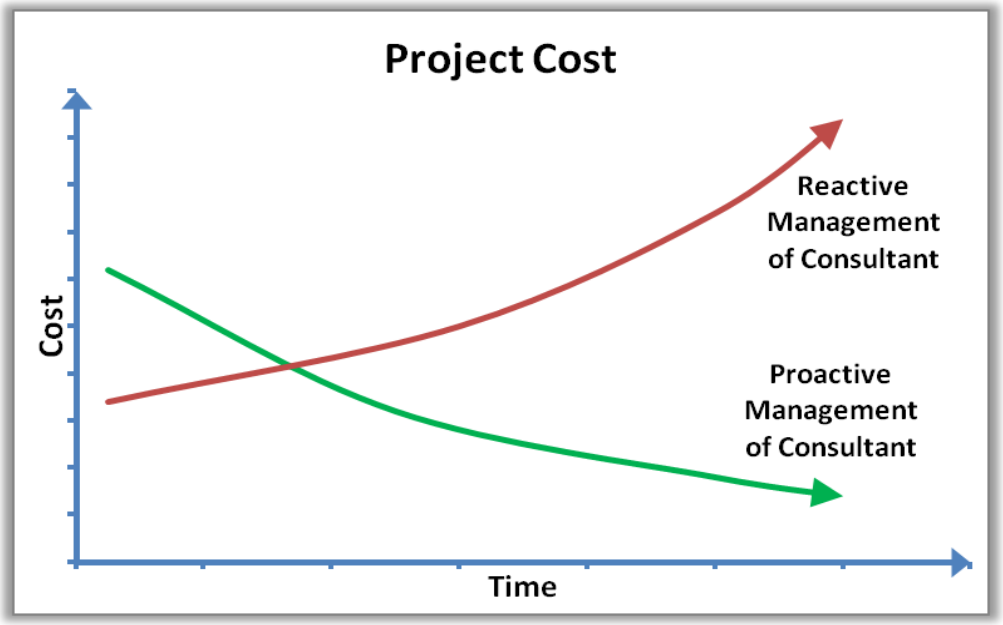

Figure 18: Proactive vs. Reactive Management of External Consultants

As it was demonstrated in this research study, agency theory and transaction cost economics are very useful and appropriate theoretical frameworks for the investigation of management practices that can be applied for more effective management of external consultants in ICT projects. The positive feedback from the research participants, which is presented in the following Section 6.3, provides further support for the validity and usefulness of the findings.

6.3 Participant Feedback

In order to assess the validity and usefulness of the theoretical model and research findings, feedback was gathered from the study participants after they were presented with the model and findings by email, and asked to provide comments and answers to the questions outlined in the Appendix D. The overall participants' feedback indicated that the developed model seems to be very valid – that is to say, to have strong face validity (Trochim, 2000). The comments that were provided by the

participants largely supported usefulness and validity of the model of the challenges in management of external consultants:

> F1: "They are useful and valid - I can relate to all of them."
>
> B2: "The model of challenges depicted is extremely accurate. I am aware or have been directly involved in situations of adverse selection and information asymmetry. Until reading this report I was not aware of the labels for these issues."
>
> D1: "Very useful."

Although there were no negative comments about the developed model, one participant noted that the identified challenges are more applicable to the individual consultants and that consulting agencies will typically do whatever it takes to satisfy the needs of their consultants:

> A1: "The issues identified above systematize well the issues of dealing with individual consultants, especially in short-term or medium-term contracts. I would say that there a consulting agency would likely have a long-term interest in maintaining good relationships with the client. In my experience, a reputable consulting firm has compensated, on their own expense, for inadequate work by their consultants."

The research participants' comments also corroborated the usefulness and validity of the model in relation to the enabling practices in management of external consultants:

> C1: "Absolutely applicable; some points I didn't notice or experience personally, but is useful to have them in mind and pay more attention to them when working with consultants in the future."
>
> F1: "They are useful and practical approaches to ensure that projects and tasks are on track. They also enable someone to manage their projects in a proactive manner."
>
> B2: "The expectation placed on a consultant to perform is much higher than on full-time staff. The consultant is considered a subject matter expert and as such, is expected to produce quality work in the defined

> period. The use of monitoring and Controlling and Governance practices will all [be] assisting in ensuring that right consultant is hired to the right tasks."

In answering the question if the presented model can help explain challenges and enabling practices in management of external consultants better or easier, the participants collectively agreed:

> A1: "Seeing issues systematized, as in this thesis, and seeing quotes of other participants has helped me to frame the issues in consultant management in my own mind. Going forward, I will have a framework to use when managing consultants (which I do constantly). I believe that having a systematic approach will help to smooth over variations in management approaches that are due to variations in consultant performance, skill level and personal characteristics."

> C1: "Yes, most of the challenges and practices I've faced so far are covered by the model."

> B2: "Yes, in that I see the importance of monitoring and measuring consultant performance, and acting quickly to address any negative issues."

At last, the research findings are generally comparable to the participants' professional experiences:

> C1: "As it's apparent from my previous answers, the research matches my experience to a great extent."

> F1: "They are in line with what I have seen and personally experienced."

> B2: "I have used a number of the enabling practices in managing consultants, such as the face-to-face management, status reporting, expectation setting."

> A1: "In general, the issues summarized in this paper reflect my experience with managing or working with consultants. I believe that some of the findings are more generalizable. For example, there may be few differences in screening for consultants or for full-time skilled permanent employees. Also, the comments of other participants do reflect the issues that I have experienced. I have also managed talented and hardworking

> consultants; however, I do understand that this research is focused on identifying issues in managing consultants."

In summary, the research model and findings seem to have strong face validity as it is shown in the comments presented by the participants. Possibly the greatest benefit of the developed model and research findings are their usefulness and applicability for the practicing managers.

6.4 Implications for Theory and Practice

Implications for the researchers are threefold. First, the presented research model for the investigation of challenges and practices in management of external consultants in ICT projects provides a more holistic picture of all identified challenges and practices in management of consultants. As such, this model can serve as a new tool and starting point for researchers in exploring the problems that are associated with challenges in management of external consultants. Second, the proposed model of challenges and enabling practices in management of external consultants in ICT projects progresses our current knowledge in this domain, and provides researchers with new insights and outlook from which they can further extend our understanding of challenges in management of external consultants and practices that can enable managers to eliminate or lessen the impact of the problems associated with these challenges. Third, this research corroborated usefulness and applicability of agency theory and transaction cost economics in the investigation of the situations that involve human interaction, relationships and cooperation in the organizational settings. More specifically, these two theories assisted the researcher in understanding and explaining external consultants' behavior and related challenges and management practices. Agency theory and transaction cost economics can be used as it is or they can be extended and adapted for the specific research context. As demonstrated in this study, agency theory and transaction cost economics theoretical frameworks complement each other and they can be used in conjunction to explain the phenomena of interest.

Another aim of this research was to address some practical needs of project managers in dealing with issues that may be created by external consultants. As a result, this research spawns the following implications for the practitioners. The systematic presentation of challenges in management of external consultants can help managers in ICT projects acquire a better understanding of what factors affect their consultants' performance. With a better understanding of the above factors, managers can anticipate certain problems and can adapt and act accordingly to prevent or address those problems. Next, the systematic presentation of enabling practices in management of external consultants in ICT projects can assist managers and organizations in getting the best value from their consulting resources and increasing ROI. These enabling practices may lead to improved project management routines and enhancement in alignment of interests between consultants and their clients. The result of this could be reduction of ICT project inefficiencies and associated costs, more accurate project schedules and improved customer satisfaction. Furthermore, these additional improvements of IT productivity can lead to an overall improvement of an organization's performance (e.g. Barua et al., 2004). The findings of this research have practical implications for consultants as well. By being aware of the challenges that their managers may be experiencing while supervising them, consultants can try to avoid these kinds of situations in order to make sure that their services will continue to be sought after.

Furthermore, management of external consultants in ICT projects affects all of the ten project management domains. Therefore, it is important to employ capable project managers who are proficient and experienced in all project management domains. However, the problem is that it is not easy to find competent project managers who possess a complex set of skills that are required for effective management of external consultants. First of all they have to be good at dealing with people, because "all organizational problems are fundamentally problems involving human interactions and processes" (Schein, 1988, p. 12). Furthermore, in addition to project management and general management skills, empirical evidence from this research suggests that adequate technical skills may also be required, especially when managing more technical consultants such as application developers or database administrators. For

example, participant D1 points out that if managers in ICT projects do not have adequate technical skills, consultants "can tell them whatever they want" and managers may not be able to verify or challenge that. This implies that generic project managers may not have adequate capabilities to cope with the challenges in management of external consultants in ICT projects.

Overall, this research provides new insights and perspective on challenges and enabling practices in management of external consultants in ICT projects and makes a contribution to our growing understanding of the phenomena associated with external consultants' behavior.

6.5 Limitations and Future Research

While the purposeful sampling strategy allowed for the preliminary exploration of the theories, a relatively small sample size limits the generalizability of the findings to a larger population. Inclusion of additional participants would increase generalizability of the findings. However, because of the funding constraints, the above was not viable in this exploratory research. Nevertheless, the proposed theoretical model that presents all identified challenges and enabling practices in management of external consultants in ICT projects can be tested in future confirmatory research using a larger sample size. Moreover, the positive feedback that was received from the study participants suggests that the proposed research model is both valid and useful, and will likely generate even more insights with additional investigation.

It is important to note that the participating managers came from a fairly homogeneous set of situations, which are not necessarily representative of the management of all types of consultants. The intent of this research was not to be able to make the findings genearalizable to the entire population of ICT consultants, but rather for the examined type of consultants, who are specifically defined in Section 1.1, consultant roles. Thus, the definition of examined consultants include all external individuals who are recruited either via consulting companies or as independent professionals, and who are hired as a body in a project team on a temporary basis to

work on the execution of ICT projects as either an expert or an extra pair-of-hands. Nevertheless, it is possible that with further investigation, the findings of this research could also be made applicable to other types of consultants and full-time employees in general.

Furthermore, this research only examined the perspectives and experiences of the practicing managers with the aim of identifying challenges and enabling practices in management of external consultants in ICT projects. Investigation of the external consultants' perspectives was not in scope because this research is bound by the pragmatic considerations of restricted funding that was available to complete this study. In order to get another dimension of the client-consultant relationship, it would be also important to examine the consultants' experiences and points of view. Therefore, future research can extend this study and examine consultants' experiences to provide another view of the phenomena of interest.

Even though the aim of this research was to include a variety of the participating managers from as many different companies as it was feasible so that all potential challenges and enabling practices in management of external consultants in ICT projects could be identified, inclusion of additional participants with different profiles from other companies that come from different industries may uncover additional challenges and enabling practices in management of external consultants. Moreover, while some of the findings may be equally applicable across all different industries and types of companies, others may not be as significant for all company types. This could also be confirmed in future research. In addition, future research initiatives could include more separation between private and public sector and other company characteristics such as size and industry type in order to enable comparison of the findings, identification of similarities, and isolation of specifics for different company types.

Although a number of conjectures about the relatedness of the research model constructs were proposed, especially in explaining how enabling practices can address challenges in management of consultants, and in reference to the interconnectedness of some of the enabling practices constructs, the focus of this study was not to provide conclusive explanation of all relationships and interactions of each construct on all other constructs. Therefore, additional investigation is needed to confirm and further refine

relationships between each of the identified enabling practices and challenges in management of consultatns. Furthermore, the complex set of relationships between each of the identified challenges in management of external consultants could be explored in future studies. Similarly, the relationships and influence of the identified enabling practices on each other could be further explored.

Other future research that can offer additional backing for the findings of this research could employ quantitative analysis and utilize research instruments such as surveys to provide additional statistical support. At the same time, this quantitative analysis could also enhance the findings of this research by measuring which of the identified challenges in management of external consultants are the most difficult to deal with. Along the same lines, future research could also measure what enabling practices are the most effective in management of external consultants and which ones are the easiest and least costly to implement. Finally, future studies could investigate what skills managers need to possess in order to be able to successfully supervise and administer work of external consultants in ICT projects.

6.6 Conclusion

While there are many external consultants whose knowledge, expertise and professionalism can make a significant contribution to the success of ICT projects (e.g. Kovar and Mauldin, 2007; Dawes et al., 2007), performance of some consultants may not always be up to the adequate standards (e.g. Wong et al., 2005; Kumar et al., 2003). Yet, very limited research has been done in exploring and understanding productivity and challenges that are associated with management of external consultants in ICT projects. Previous scattered studies have isolated some individual challenges in management of external consultants in ICT projects, but no previous research attempted to integrate all challenges in one model. Identification and formulation of enabling practices that can help managers to deal with the challenges in the management of external consultants has also been underexplored in the academic literature. Therefore, the aim of this research was to test and synthesize previously identified challenges and enabling practices in management of external consultants in

ICT projects and create an integrated model of all challenges and enabling practices. Practicing managers were used as a primary data source and the collected data was analyzed using the qualitative research methods to uncover a set of complex and interrelated factors that influence consultants' performance. For the purpose of this study, consultants were considered to be all external individuals who are hired as a body in a project team on a temporary basis as either an expert or an extra pair-of-hands.

The findings of this research confirmed that a variety of challenges may be encountered in management of external consultants in ICT projects. These include: consultant short-term goals, principal financial motivators, status update problems, knowledge transfer problems, truthfulness problems, capabilities mismatch, up-selling, getting into comfort zone, expiring contract problems, power of knowledge, consultant arbitrariness, work estimate problems, and challenges with new consultants. More detailed breakdown and explanation of the above challenges listed are provided in Section 6.2. Other important findings of this research are that a composite set of management practices can be utilized to effectively deal with the challenges in the management of external consultants in ICT projects. These management practices include: frequent follow-up, usage of multiple information sources, peer review, multiple progress verification, direct face to face management, expectations setting, deliverables management, procurement and selection process, creating proper atmosphere, payment control, limiting length of contract, and building relationships and trust. More detailed breakdown and explanation of these enabling practices are provided in the above Section 6.2.

This research utilized agency theory and transaction cost economics to guide our understanding of challenges and enabling practices in management of external consultants in ICT projects and explain these phenomena of interest. Furthermore, this research adopted and extended the following agency theory and transaction cost economics constructs: self-interest, information asymmetry, adverse selection, opportunism, asset specificity and uncertainty, into the above specified challenges in management of consultants. Similarly, this research adopted and extended the following agency theory and transaction cost economics constructs: monitoring, controlling,

governance, incentives and contract management, and building relationships and trust, into the above listed enabling practices in management of consultants. In addition, this study also made a contribution to the management literature by demonstrating that agency theory and transaction cost economics provide a fertile ground for the exploration and explanation of challenges and practices in management of consultants in the context of ICT projects, and verifying that these two theories are very useful and appropriate frameworks for the investigation of the circumstances that include human interaction and cooperation in the organizational settings.

A practical contribution of this research included presenting managers and other practitioners with new insights and an integrated model of all challenges and enabling practices in management of external consultants. This can assist managers in gaining a better understanding of the factors that affect their consultants' performance. By being aware of the challenges that may arise in management of external consultants, managers can anticipate potential difficulties and prepare adequate strategies for coping with these issues in advance. The proposed model of enabling practices in management of external consultants can assist organizations in getting the best value out of their consulting resources and increasing ROI. Furthermore, these enabling practices may lead to improved project management routines and enhancement in alignment of interests between consultants and their clients. The outcome of this could be reduction of project inefficiencies and associated costs, more accurate project schedules and improved client satisfaction. By getting the most out of consulting resources, productivity of ICT projects is improved, and this can ultimately result in an overall improvement of an organization's performance (e.g. Barua et al., 2004). However, in order to get the best value from the consultants' engagements, it is essential to employ capable project managers who possess a complex set of skills that are required for the effective management of these external resources. In fact, management of external consultants and their work in ICT projects spreads across all ten project management domains. Proper usage and application of the project management framework (PMI, 2013) can assist in ensuring that consultants' efficiency and effectiveness stays at the high levels. Therefore, it is important have experienced project managers who are competent in all project management domains. Usefulness

and applicability of the project management processes for this research study are discussed in Section 2.7 and throughout all data analysis sections in Chapter 4 and 5.

In conclusion, improvements in management of external consultants in ICT projects will have a direct positive impact on the success of these projects. Problems related to challenges in management of external consultants are interrelated and a problem in one area can affect other areas. Similarly, a management effectiveness improvement in one area can improve management effectiveness in other areas as well. Therefore, managers of ICT projects must strive for the improvement of practices in management of external consultants. The enabling practices that were presented in this research can help them with this objective.

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APPENDICES

Appendix A – Ryerson University Research Ethics Board Approval

RYERSON UNIVERSITY
RESEARCH ETHICS BOARD

To: Ronald Josipovic
ITM

Re: REB 2012-292: Challenges in management of external consultants in it projects: An exploratory study of project managers' perspectives

Date: November 1, 2012

Dear Ronald Josipovic,

The review of your protocol REB File REB 2012-292 is now complete. The project has been approved for a one year period. Please note that before proceeding with your project, compliance with other required University approvals/certifications, institutional requirements, or governmental authorizations may be required.

This approval may be extended after one year upon request. Please be advised that if the project is not renewed, approval will expire and no more research involving humans may take place. If this is a funded project, access to research funds may also be affected.

Please note that REB approval policies require that you adhere strictly to the protocol as last reviewed by the REB and that any modifications must be approved by the Board before they can be implemented. Adverse or unexpected events must be reported to the REB as soon as possible with an indication from the Principal Investigator as to how, in the view of the Principal Investigator, these events affect the continuation of the protocol.

Finally, if research subjects are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research.

Please quote your REB file number (REB 2012-292) on future correspondence.

Congratulations and best of luck in conducting your research.

Nancy Walton, Ph.D.
Chair, Research Ethics Board

Appendix B – Research Participation Consent Form

CONSENT TO PARTICIPATE IN RESEARCH

Challenges in management of external consultants in IT projects: An exploratory study of project managers' perspectives

You are invited to participate in a research study conducted by Ronald Josipovic, MMSc candidate, supervised by Dr. Tim McLaren, MBA, PhD of the Ted Rogers School of Management at Ryerson University, Toronto, Ontario. The results of this study will be used for a master's thesis and contribute to the body of knowledge in project management.

If you have any questions or concerns about this research, please contact the following research investigators:

Principal investigator: Ronald Josipovic, Tel: 647-439-2949, e-mail: rjosipov@ryerson.ca
Supervisor: Dr. Tim McLaren, Tel: 416-979-5000 ext. 7942, e-mail: tmclaren@ryerson.ca

PURPOSE OF THE STUDY

The purpose of this study is to investigate project management practices and challenges in management of external consultants in IT projects for a master's thesis study by Ronald Josipovic, a graduate researcher in the Master of Management Science (MMSc) program at Ted Rogers School of Management of Ryerson University. Experiences of project managers and other practitioners who are involved in management or supervision of external consultants will be explored in order to gain better insight into unique challenges in management of external consultants in IT projects, and to uncover prospective solutions to these challenges.

PROCEDURES

You will be asked a number of questions related to your experiences with management and supervision of external consultants and complexities and challenges that may be associated with it. The interview will explore a number of predefined questions, but will stay flexible to allow discussion of new questions and themes that may come up as a result of interview discussions. The interview will last approximately one hour and will be audio recorded to ensure data accuracy. You will be asked to provide you consent for audio recording before proceeding with the interview. The interview questions are grouped together to explore issues related to information sharing and communication problems between consultants and their clients, and supervision and management of external consultants' performance.

POTENTIAL RISKS AND DISCOMFORTS

This research bears minimal risks. No questions about confidential or competitive information will be asked. Participants will not be required to reveal confidential or proprietary knowledge. The identities of all individuals or organizations will be thoroughly disguised and will not be released. It is understood that information provided by the participant is their opinion and may not represent the views or realities of their firms.

POTENTIAL BENEFITS TO PARTICIPANTS AND TO SOCIETY

The aim of this study is to gain better understanding of unique challenges in management of external consultants and to uncover prospective solutions to these challenges. The proposed conceptual model is expected to yield new project management knowledge and strategies in the effective and efficient management of external consultants. The results and analysis of the findings will be shared with the participants, which will enable them to gain new insights about management of external consultants and provide them with recommendations and best practices to cope with the challenges related to management of external consultants.

NO PAYMENT FOR PARTICIPATION

Participation in this research is voluntary and participants will not receive any payments for their involvement in this research. However, results and detailed recommendations from the study will be made available to the participants.

CONFIDENTIALITY

The identities of the participants will be thoroughly disguised and will not be released. Participants will only be identified by a sequential numbering system (e.g. company A, participant A1, etc.).
Investigators will maintain confidentiality and will not disclose any identifying information about participants in any report or publication. All collected data, including hard and digital copies will be securely stored in a locked cabinet for a period of one year after the conclusion of the study. All collected data will be destroyed after that period.

VOLUNTARY NATURE OF PARTICIPATION

Participation in this study is voluntary. Your choice of whether or not to participate will not influence your future relations with Ryerson University. If you decide to participate, you are free to withdraw your consent and to stop your participation at any time without penalty. At any particular point in the study, you may refuse to answer any particular question or stop participation altogether.

INQUIRIES AND RIGHTS OF PARTICIPANTS

If you have any questions about this research now, please ask. If you have questions later about this research, you may contact the investigators listed above.
This study has been approved by the Ryerson University Research Ethics Board. If you have questions regarding your rights as a research participant, you can contact:

Ryerson University Research Ethics Board
c/o Office of the Vice President, Research and Innovation, Ryerson University
350 Victoria Street, Toronto, ON M5B 2K3 Tel: 416-979-5042

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand the information provided for the study "Challenges in management of external IT consultants: An exploratory study of project managers' perspectives". My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____	_____	_____
Name of Participant	Signature of Participant	Date

I understand that the interview will be audio recorded to ensure accuracy and that the data will only be used for the study "Challenges in management of external IT consultants: An exploratory study of project managers' perspectives". My questions have been answered to my satisfaction and I agree to be audio recorded during the interview.

_____	_____	_____
Name of Participant	Signature of Participant	Date

SIGNATURE OF INVESTIGATOR

In my judgment, the participant is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

_____	_____	_____
Name of Investigator	Signature of Investigator	Date

Appendix C – Interview Protocol

INTERVIEW PROTOCOL

CHALLENGES IN MANAGEMENT OF EXTERNAL CONSULTANTS IN IT PROJECTS: AN EXPLORATORY STUDY OF PROJECT MANAGERS' PERSPECTIVES

INTRODUCTION

This interview will inquire about your experiences with management of external consultants who work on IT projects. The purpose of this interview is to discover unique characteristics and challenges in management of external consultants in IT projects and to seek to uncover prospective solutions to these challenges.

We will cover some areas related to information sharing and communication problems between consultants and their clients, supervision and management of consultants' performance and any other issues that may come to mind as a result of our discussion.

For the purpose of this interview, consultants are considered to be all external individuals who are hired to work on IT projects on a temporary basis (e.g. they are not hired on a permanent basis). IT projects include all technical projects (e.g. development and implementation of software) as well as projects in which IT enables business process improvements. This implies that technical people such as software developers, architects, database administrators, system analysts and similar as well as business people such as business analysts and project managers are considered to be external consultants for the purpose of this study.

PART A - BACKGROUND

1. Briefly describe your role in dealing with consultants in your current job.

   Optional probes:

   - What is your job title?
   - How long have you worked with external IT consultants?
   - What type of consultants do you typically deal with?
   - Do you have experience as a consultant yourself?

- Does that help?

PART B - INFORMATION SHARING AND COMMUNICATION

2. How do you collect information about consultants' performance and work progress?

   Optional probes:

   - What difficulties do you encounter in this process?
   - Are there any other practices in collecting consultants' performance and work progress information that you do not do now, but that you would like to be able to do?

3. Have you had many issues with consultants not providing timely and accurate status updates and other project relevant information?

   Optional probes:

   - If yes
     - Why do you think these issues happen?
     - How do you deal with them?
   - If no
     - How do you check if consultants are providing timely, accurate and complete information and status updates?
   - Are there any practices that you currently do not use that you would like to be able to use to make sure that they are providing timely and accurate information and status updates?

4. At times, IT consultants may be reluctant to share some negative or bad news about their progress and project status. How frequently does this situation happen?

   Optional probes:

   - What do you think caused this to happen?
   - How do you deal with these situations?
   - How can you prevent this from happening?

- Do you think that consultants feel that it is their personal responsibility to report bad news or is it something else that makes them report bad or negative news?

5. Have you had many cases in which consultants were not sufficiently documenting knowledge that is required to support their solutions after they leave the projects?

    - If yes, why do you think they are reluctant to document and share the knowledge?

        i. How can this problem be improved?

6. In your experience, were there any discrepancies between what you presented to consultants as their assignment and what they perceived to be the problem that needs to be solved?

    Optional probes:

    - Why do misunderstandings of a problem and project needs and goals happen?

    - How do you make sure that they have the same understanding of the problem and the work assignment as you do?

PART C – PERFORMANCE MANAGEMENT

7. What monitoring and controlling mechanisms do you use in management of consultants?

    Optional probes:

    - What mechanisms do you spend the most amount of time on?

    - What mechanisms work the best?

    - How do you make sure consultants are in agreement with monitoring and controlling mechanisms (e.g. they are not resisting or opposing any of these methods?)

    - What other non-standard mechanisms do you think would make consultant management and supervising more effective?

8. In your experience, does the amount of time consultants spend working for your company affect their performance? Why or why not?

   Optional probes:

   - If they work for your company for a longer period of time, how does that affect their performance?
   - If they work for your company for a shorter period of time, how does that affect their performance?
   - What things are necessary to maximize consultants' performance regardless of the duration of projects?

9. How does management of consultants compare to that of internal employees?

   Optional probes:

   - In your experience, what is more difficult: management of consultants or management of internal employees?
     - What things make it more difficult?
   - What other unique challenges did you come across in management of external consultants?

10. Other than formal strategies such as meetings, status reports etc., what are some informal strategies that you use to manage consultants?

    Optional probes:

    - In what situations do the informal strategies work better than the formal strategies?

11. What are some forms of shirking (avoidance of work and responsibilities) that external consultants may have manifested while working on your projects?

    Optional probes:

    - In your opinion, what are the best ways to address consultants' shirking?

- What is not a good way to address this problem? What things can make it even worse?

- How does the amount of shirking that external consultants manifest compare to that of internal employees?

12. In your experience, what are the most important skills that are necessary to effectively manage external consultants?

    Optional probes:

    - How can one build up these skills?

    - What can happen if this expertise is not in place?

PART D – OTHER ISSUES

13. Are there any other practices or issues that we haven't talked about and that you think are important in management of external consultants?

Appendix D – Participant Feedback Gathering Protocol

Feedback on Research Findings and Model of Challenges and Enabling Practices in Management of External Consultants

How useful and valid are research findings and the theoretical model?

The summary of the research findings and the developed model is shared with the study participants by email. They are asked to provide their feedback by commenting on the model and the findings and providing responses the following questions:

1. How useful and valid is the model of challenges that may arise in management of external consultants?

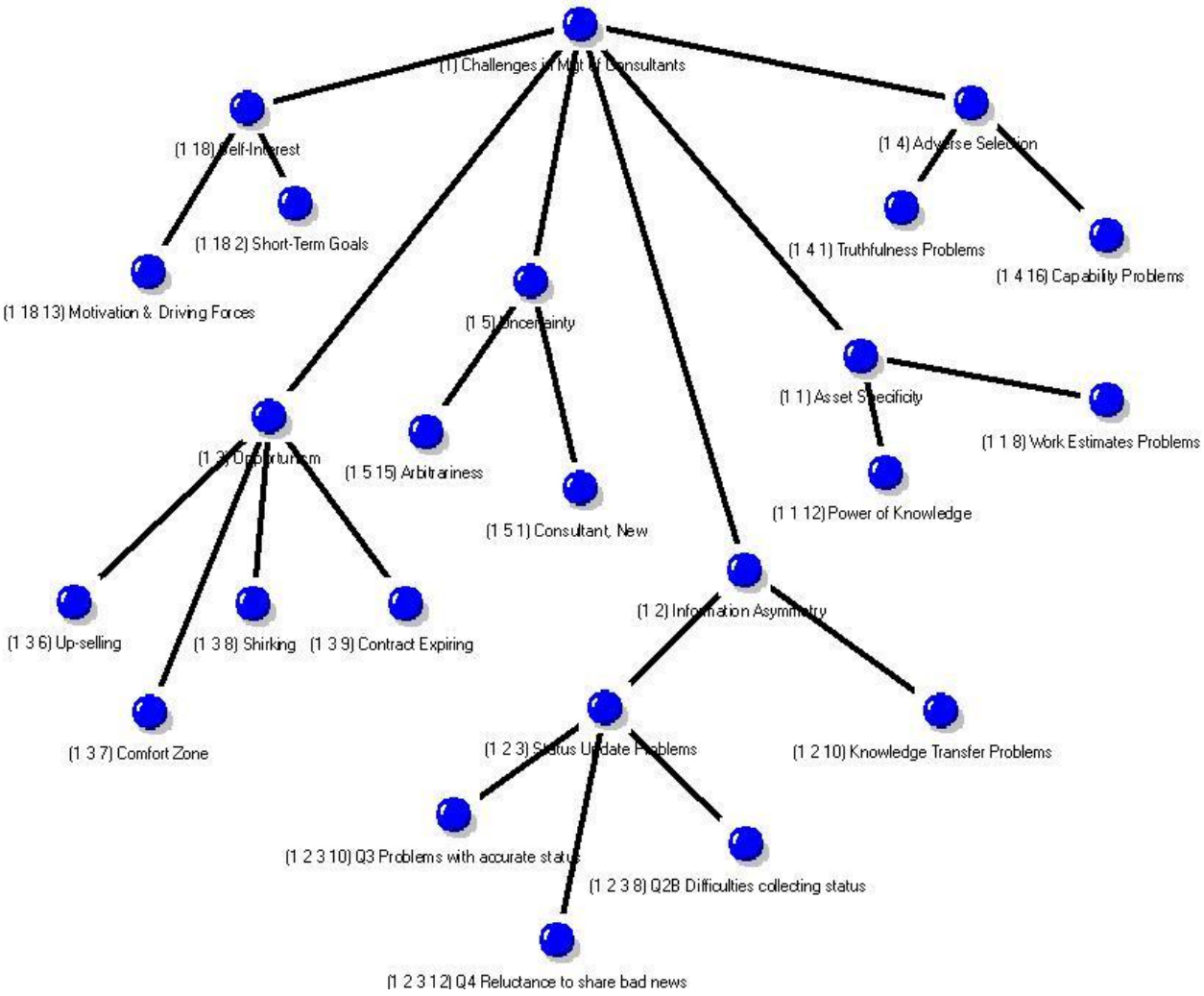
2. How useful and valid is the model of practices that may enable practitioners to cope with the challenges in management of external consultants?

3. Can the above models help explain challenges and practices that you may come across in management of external consultants better or easier?

4. How do findings of this research compare with your experiences?

Appendix E – Final Codes Used in Qualitative Analyses

An iterative process of coding and thematic analysis (Creswell, 1998; Miles and Huberman, 1994; Strauss and Corbin, 1990; Eisenhardt, 1989b) was utilized to discover concepts and codes, and identify and analyze reoccurring themes from the interview transcripts. The identified codes were subsequently organized into categories and subcategories. Two core categories that emerged are: challenges in management of consultants and enabling practices in management of consultants. The coding structure of challenges in management of external consultants is shown below.



The coding structure of enabling practices in management of external consultants is illustrated below.